Natural History

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1843.

ZOOLOGY

OF

NEW-YORK,

OR THE

NEW-YORK FAUNA;

COMPRISING DETAILED DESCRIPTIONS OF ALL THE ANIMALS HITHERTO OBSERVED WITHIN THE STATE OF NEW-YORK, WITH BRIEF NOTICES OF THOSE OCCASIONALLY FOUND NEAR ITS BORDERS, AND ACCOMPANIED BY APPROPRIATE ILLUSTRATIONS.

BY JAMES E. DE KAY.

PART II. BIRDS.

ALBANY:
CARROLL AND COOK, PRINTERS TO THE ASSEMBLY.
.....
1844.

The copy right of this work is secured for the benefit of the People of the State of New-York.

SAMUEL YOUNG,

Secretary of State.

Albany, 1843.

TO

WILLIAM C. BOUCK,

GOVERNOR OF THE STATE OF NEW-YORK.

I submit a continuation of a Report on the Zoology of the State.

And have the honor to be,

With great respect,

Your obedient servant,

JAMES E. DE KAY.

LIST

OF

BOOKS ON ORNITHOLOGY, REFERRED TO IN THE FOLLOWING PAGES.

Audubon, J. J. American Ornithological Biography. 5 vols. 8vo. London.

" Birds of America. 4 vols. folio.

" Note on the Hirundo fulva. (Ann. Lyc. 1, p. 163.)

" Facts and Observations on the permanent residence of the Swallow in the United States. (Ib. p. 166.)

" Synopsis of the Birds of North America. 8vo. pp. 359. Edinburgh, 1839.

" The Birds of America, from drawings made in the United States and their territories. 7 vols. 8vo. New-York and Philadelphia, 1839 et seq.

Bonaparte, C. L. American Ornithology; or the Natural History of Birds inhabiting the United States, with figures, drawn, engraved and colored from nature. 4 vols. folio. Philadelphia, 1826 et seq.

" Sulla seconda edizione del Regno animale del Barone Cuvier, osservazioni. 8vo. pp. 175. Bologna, 1830.

" Saggio di una distribuzione, &c. degli animali vertebrati. 8vo. pp. 144. Roma, 1831.

" The Genera of North American Birds, and a Synopsis of the species found within the territory of the United States. (Annals of the Lyceum of Natural History of New-York, Vol. 2, 1828.)

" Supplement to the Genera of North American Birds. (Zoological Journal, Vol. 2.)

" Account of four species of Stormy Petrel. (Acad. Nat. Sciences, Vol. 3, p. 227.)

" Supplement to the preceding account. (Zool. Journal, Vol. 2.)

" Observations on the nomenclature of Wilson's Ornithology. (Partly published in the 4th and 5th volumes of the Journal of the Academy of Natural Sciences, as far as No. 227; and subsequently compl ted and published in a separate form.)

" Additions to the Ornithology of the United States. (Jour. Acad. Nat. Sciences, Vol. 5, p. 28.)

" Descriptions of two new species of Mexican Birds. (Ib. Vol. 4, p. 387.)

" On a new species of Duck described by Wilson as the Anas fuligula of Europe. (Ib. Vol. 3, p. 381.)

" A Geographical and Comparative List of the Birds of Europe and North America. 8vo. Lond. 1838.

" Specchio comparativo delle ornithologie di Roma et di Filadelfia. 8vo. Pisa, 1827.

Brewer, T. M. Some additions to the Catalogue of the Birds of Massachusetts, in Prof. Hitchcock's Report. (Bost. Journ. Nat. History, Vol. 1, p. 435.)

" Remarks on the Cow Blackbird. (Ib. p. 431.)

" Wilson's American Ornithology, with Notes by Jardine; to which is added a Synopsis of American Birds, including those described by Bonaparte, Audubon, Nuttall and Richardson. 8vo. pp. 746. Boston, 1840.

Brisson, A. D. Ornithologia, sive Synopsis methodica avium. 2 vols. 8vo. Lug. Bat. 1763.

Clinton, Dewitt. On the Hirundo fulva of Vieillot, with some general remarks on the birds of this genus. (Ann. Lyc. N. York, Vol. 1, p. 156.)

" Remarks on the Columba migratoria or Passenger Pigeon (Med. & Phil. Register, Vol. 2, p. 210.)

Cooper, W. Description of a new North American species of the Genus Fringilla (vespertina). (Ann. Lyc. New-York, Vol. 1, p. 219.)

Cuvier, G. La Règne animal distribué d'après son organization, par le Chevalier Cuvier. 4 vols. 8vo. Paris, 1817 et seq.

" The same, translated by H. M'Murtrie. 4 vols. 8vo. Philadelphia, 1831 et seq.

" The same, translated by Griffith. 16 vols. 8vo. London. Vols. 6, 7 & 8.

De Kay, J. E. Catalogue of the Animals of the State of New-York. Albany, 1840.

Doughty, J. The Cabinet of Natural History and American Rural Sports, with illustrations. Vol. 1, 4to. Philadelphia, 1830.

Douglass, D. Observations on some species of the Genera Tetrao and Ortyx, natives of North America, with descriptions of four new species of the former and two of the latter. (Lin. Tr. Lond. 4to. 1829.)

Emmons, E. Catalogue of the Birds of Massachusetts (See Hitchcock).

Fleming, J. The Philosophy of Zoology; or a general view of the structure, functions and classification of animals. 2 vols. 8vo. Edinburgh, 1822.

Forster, J. R. A Catalogue of the Animals of North America (plate). 8vo. pp. 34. London, 1771.

Giraud, J. P. Descriptions of sixteen new species of North American Birds collected in Texas in 1838. Folio plates, New-York, 1841.

" The Birds of Long Island. 8vo. pp. 397. New-York, 1844.

Hitchcock, E. Catalogue of the Animals and Plants of Massachusetts. 8vo. pp. 142. Amherst, 1835.

Jardine, W. American Ornithology; or Natural History of the Birds of the United States, by A. Wilson, with a continuation by C. L. Bonaparte. 3 vols. 8vo. London, 1832.

Kirtland, J. P. Report on the Zoology of Ohio.

Linnæus, C. Systema Naturæ. 12th edition.

Linsley, J. H. Catalogue of the Birds of Connecticut, arranged according to their natural families. (Amer. Journ. Science, Vol. 41.)

Michener, E. A few facts in relation to the identity of the Red and Mottled Owls. (Journ. Acad. Nat. Sciences, Vol. 7, p. 53.)

Montagu, G. Ornithological Dictionary, or Alphabetical Synopsis of British Birds. 2 vols. 8vo. London, 1802; and Supplement, 1813.

Nuttall, T. Manual of the Ornithology of the United States and of Canada. 2 vols. 8vo. Cambridge, 1832 & 1834.

Ord, G. Account of an American species of the Genus Tantalus or Ibis. (Jour. Acad. Nat Sciences, Vol. 1, p. 53.)

" Observations on two species of the Genus Gracula of Latham. (Ib. p. 253.)

" Account of the Florida Jay of Bartram. (Ib. p. 345)

" Supplement to the American Ornithology of A. Wilson; containing a sketch of the author's life, with a selection of his letters, and a history of those birds which were intended to compose his ninth volume. Folio. Philadelphia, 1825.

Peabody, W. B. O. Report on the Ornithology of Massachusetts. 8vo. pp. 148. Boston, 1839.

Pennant, W. Arctic Zoology. 3 vols. 4to. London, 1784 et seq.

Richardson & Swainson. Fauna Borcali Americana, or the Zoology of the northern parts of British America. Part II. Birds. 4to. London, 1828.

Sharpless, J. T. Account of the Wild Swan, with a figure (See Doughty, p. 181).

" Description of the same. (Am. Journ. Science.)

Temminck, C. J. Manuel d'Ornithologie, ou Tableau systématique des oiseaux qui se trouvent en Europe, &c. 2 vols. 8vo. Paris, 1820.

" Observations sur la classification methodique des oiseaux. 8vo. pp. 60. Amsterdam, 1817.

Townsend, J. K. Descriptions of twelve new species of Birds, chiefly from the vicinity of the Columbia river. (Jour. Acad. Nat. Sciences, Vol. 7, p. 187.)

" Description of a new species of Sylvia. (Ib. p. 149.)

" Note on Sylvia tolmœi. (Ib. p. 159.)

" Description of a new species of Cypselus (vauxii). (Ib. p. 148.)

" List of the Birds inhabiting the region of the Rocky Mountains, the territory of the Oregon, and the Northwest coast of America. (Ib. p. 151.)

Trudeau, J. Description of the White-winged Tanager (Pyranga leucoptera). (Ib. p. 160.)

Wilson, A. American Ornithology, or the Natural History of the Birds of the United States. 9 vols. folio Philadelphia, 1808 et seq.

SYNOPSIS

OF THE

FAMILIES AND GENERA OF BIRDS FOUND WITHIN THE STATE OF NEW-YORK.

ORDER ACCIPITRES.

VULTURIDÆ,	Cathartes.
FALCONIDÆ,	Aquila, Haliaetos, Pandion, Buteo, Nauclerus, Falco, Astur, Circus.
STRIGIDÆ,	Surnia, Bubo, Syrnium, Otus, Ulula, Strix.

ORDER PASSERES.

CAPRIMULGIDÆ,	Caprimulgus, Chordeiles.
HIRUNDINIDÆ,	Hirundo, Chætura.
AMPELIDÆ,	Bombycilla, Alcedo.
TROCHILIDÆ,	Trochilus.
CERTHIDÆ,	Sitta, Certhia, Mniotilta, Troglodytes.
PARIDÆ,	Parus.
SILVIADÆ,	Regulus, Sialia.
MERULIDÆ,	Orpheus, Merula.
MOTACILLIDÆ,	Anthus, Seiurus.
SYLVICOLIDÆ,	Trichas, Vermivora, Sylvicola, Wilsonia, Culicivora.
MUSCICAPIDÆ,	Muscicapa, Tyrannus.
VIREONIDÆ,	Vireo, Icteria.
LANIIDÆ,	Lanius.
CORVIDÆ,	Garrulus, Pica, Corvus.
QUISCALIDÆ,	Quiscalus, Sturnella, Icterus, Molothrus, Dolichonyx.
FRINGILLIDÆ,	Coccoborus, Coccothraustes, Struthus, Fringilla, Emberiza, Ammodramus, Carduelis, Linaria, Erythrospiza, Pitylus, Pipilo, Spiza, Pyranga, Plectrophanes, Alauda, Corythus, Loxia.
PICIDÆ,	Picus.
CUCULIDÆ,	Coccyzus.
COLUMBIDÆ,	Ectopistes, Columba.

ORDER GALLINÆ.

PHASIANIDÆ,	Meleagris, Pavo, Numida, Gallus.
TETRAONIDÆ,	Ortyx, Tetrao.

ORDER GRALLÆ.

CHARADRIDÆ,	Charadrius, Squatarola, Strepsilas, Hæmatopus.
ARDEIDÆ,	Grus, Ardea.
TANTALIDÆ,	Ibis.
SCOLOPACIDÆ,	Numenius, Hemipalma, Heteropoda, Tringa, Calidris, Totanus, Limosa, Scolopax, Rusticola.
RALLIDÆ,	Rallus, Ortygometra, Gallinula.
RECURVIROSTRIDÆ,	Himantopus, Recurvirostra.
PHALAROPODIDÆ,	Phalaropus, Lobipes, Holopodius.

ORDER LOBIPEDES.

PODOCIPIDÆ,	Fulica, Podiceps, Hydroka.

ORDER NATATORES.

ALCIDÆ,	Uria, Mergulus, Mormon, Alca.
COLYMBIDÆ,	Colymbus.
PROCELLARIDÆ,	Puffinus, Thalassidroma.
PELECANIDÆ,	Pnalacracorax, Pelecanus, Sula.
LARIDÆ,	Rhynchops, Sterna, Larus, Lestris.
ANATIDÆ,	Mergus, Fuligula, Anas, Anser, Cygnus.

THE NEW-YORK FAUNA.

CLASS II. BIRDS.

VERTEBRATED WARM-BLOODED OVIPAROUS ANIMALS, BREATHING BY LUNGS, WHICH ARE UNDIVIDED AND ATTACHED TO THE RIBS. MOUTH ELONGATED INTO A HORNY BILL. BODY COVERED WITH FEATHERS; WITH TWO WINGS AND TWO FEET. FORMED FOR FLYING.

ORDER I. ACCIPITRES.

Bill strong, more or less hooked, covered towards the base by a membrane called a *cere*. Wings powerful. Legs usually stout. Tibia muscular, completely feathered. Toes four, three in front and one behind. Claws stout, acute, curved and retractile. Tail of 12 – 14 feathers.

Obs. This order is commonly known under the name of *Birds of prey*, including Hawks, Eagles, Owls, &c. Live upon the smaller living quadrupeds, birds, reptiles, fishes and insects, and also upon dead bodies. Females larger than the males. The order includes several families, at the head of which is usually placed the

FAMILY VULTURIDÆ.

Head and part of the neck divested of feathers, or covered with a short down. Toes and tarsus bare of feathers; the latter shorter than the middle toe. Outer toes connected at the base by a membrane. Claws not much incurved, and rather blunt. Eyes not prominent.

Obs. This is the only family, among the birds of prey, which feeds its young by disgorging its own food. Feeds almost exclusively on carrion. Comprises at present ten species, all peculiar to America, of which one only is seen in this State, where it is a rare but occasional visiter.

GENUS CATHARTES. Illiger.

Bill elongated, straight at the base: upper mandible covered to the middle by the cere. Nostrils contiguous, medial, oblong, pervious, naked. Tongue concave in the middle; the edges serrate. Tarsus short, stout. Middle toe longest; lateral ones equal; hind toe very small. Claws stout, arched. Wings very large; third, fourth and fifth primaries longest.

THE TURKEY BUZZARD.

Cathartes aura.

PLATE V. FIG. 12.

(STATE COLLECTION. Male.)

Vultur aura. Wilson, Am. Ornith. Vol. 9, p. 96, pl. 75, fig. 1.
Cathartes aura. Temminck, Man. d'Orn. Ed. 2, Vol. 1, p. 48.
C. id. Bonap. Ann. Lyc. Nat. Hist. N. Y. Vol. 2. p. 23.
Turkey Buzzard. Nuttall, Manual Orn. U. S. Vol. 1, p. 43. Audubon, Pl. 151; Ornith. Biog. Vol. 2, p. 296; Vol. 5, p. 339.
Red-headed Turkey Vulture. Id. Birds of America, Vol. 1, p. 15, pl. 2 (male and young).
Turkey Vulture or *Turkey Buzzard.* Giraud, Birds of Long Island, p. 1.

Characteristics. Black. Head and neck red. Neck feathered equally all round. Wings not extending beyond the tail, which is rounded. *Young*, dark brown, with the wing-coverts and secondaries spotted with white.

Description. Cutting margin of the upper mandible undulated. Nostrils large, oblong-elliptic, nearer the ridge of the mandible than to the cutting edge. Third and fourth primaries longest. Tarsus covered with small rounded convex scales. Naked portion of the neck extending to the breast bone, sprinkled with a few short black hairs. Legs feathered to the knees.

Color. Black or deep blackish brown; darkest on the neck, breast and belly; glossed above with green and bronze. Eyes dark hazel. The wrinkled skin on the neck behind covered with black down. Bill white towards the tip.

Length, 30·0 – 32·0. Extent of wings, 72·0 – 76·0.

The Turkey Buzzard, the well known scavenger of our southern cities, is exceedingly rare in this State. The southern part of New-Jersey is the most northerly breeding place of the Turkey Buzzard along the Atlantic coast. Previous to the establishment of a railroad between New-York and Philadelphia, one might, at any time in July or August, have seen flocks of these birds attracted thither by the carcases of horses which had fallen victims to the rivalry between stage-coach proprietors. I have seen them upon several occasions at South-Amboy,

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and from thence the distance is inconsiderable to the west end of Long island. Here I have seen them twice, and they appear to be known to the country people, who speak of them, however, as very rare, and only seen at intervals of several years, and during the hottest of the season. Dr. Eights assures me that he saw them once on the low islands in the Hudson below Albany. Southwardly it is supposed to range to the River La Plata. They are found abundantly on the Rocky mountains and along the Columbia river, and according to Richardson as far north as the 53d parallel. It is common in Ohio during the summer, but does not continue in the northern parts of that State during the winter. *Food*, carrion, disabled animals, the eggs of birds, etc. Lay two eggs, nearly three inches long, yellowish white, with dark brown blotches particularly at the larger end.

(*EXTRA-LIMITAL.*)

C. atratus. Black Vulture. (Aud. B. of A. Pl. 3.) Neck more feathered above than below. Tail emarginate. Young entirely brown. *Southern States.*

C. californianus. (Aud. Ib. pl. 1.) Feathers of the collar and breast lanceolate. Wings reaching beyond the tail. Length, 55 inches. *Columbia river.*

FAMILY FALCONIDÆ.

Head and neck feathered. Tarsus longer than the middle toe. Claws strong, sharp, much curved, very retractile. Lower mandible obliquely rounded at the tip. Eyes large and prominent, with a projecting bony ridge above.

Obs. This family, which formerly contained but two genera, now comprises from nine to twelve, according to the views of systematic writers.

(*EXTRA-LIMITAL.*)

Genus Polyborus, *Vieillot.* Cere large, covered with hair-like feathers continued over the cheeks and behind the eyes. Nostrils narrow, oblique. Wings long; the third and fourth quills longest. Tail rounded. Bill large, much compressed.

P. brasiliensis (Audub. B. of A. Vol. 1, p. 21, pl. 4.) Above blackish brown. Head crested. Tail white, with a broad dusky band at the tip. Cere dull red. Legs yellow. *Florida.* Rare.

GENUS AQUILA. Brisson.

Head large, flattened above, plumed. Beak thick, powerful, nearly straight at its base, somewhat angular above, and strongly hooked at the tip. Nostrils oval or rounded, oblique. Legs clothed with feathers to the toes, which are short, and united by a short web. Feathers of the head and neck narrow and pointed. Wings long; the fourth quill longest: the outer six abruptly cut out on the inner web.

THE GOLDEN EAGLE.

Aquila chrysaetos.

PLATE VI. FIG. 14 (Young).

Ring-tailed Eagle. Wilson, Vol. 7, p. 13. pl. 55, fig. 1 (young).
Falco fulvus. Bonap. Am. Lyceum Nat. History N. Y. Vol. 2, p. 25.
Golden Eagle. Audubon, Orn. Biog. Vol. 2, p. 464.
Royal or *Golden Eagle.* Nuttall, Manual Orn. Vol. 1, p. 62. Aud. B. of A. 8vo. Vol. 1, p. 50, pl. 12 (adult).
Aquila chrysaëtos, Golden Eagle. Giraud, Birds of Long Island, p. 8.

Characteristics. Dusky. Cere and toes yellow. Tail rounded, reaching beyond the wings. *Young*, with three-fourths of the tail white towards the base.

Description. The third primary nearly as long as the fourth. Secondaries broad and rounded. Tail broad, with the feathers broad, rounded, and slightly pointed at their ends. Claws flat beneath.

Color. Bill bluish at base, black towards the tip. Eyelids bright blue. Fore part of the head, cheeks and throat deep brown. Neck, on its posterior part and sides, light fulvous brown. Tail light fulvous brown. *Young*, to the third year, with the tail white, banded with black at the tips.

Length, 35·0 – 40·0. Extent of wings, 80·0 – 84·0.

The Golden Eagle is a rare species, a single pair appearing to monopolize a large district. It usually selects inaccessible rocky peaks for its abode, where it builds its nest. The eggs are usually two, brownish white with scattering brownish streaks, and about 3·5 inches in length. Their food consists of living quadrupeds, birds, etc., rarely touching dead bodies. They are frequently observed near the Highlands on the North river, and have been seen on Lake Erie. A fine specimen was shot a few years since at Islip, Suffolk county, and is now in the collection of my late estimable friend Mr. De Rham. Its geographical range northward extends to the 66th parallel. This species is common to Europe and America.

GENUS HALIAETOS. Savigny.

Ridge of the beak convex and compressed : lower mandible with the tip obliquely truncate. Nostrils oblong, oblique. Upper half of the tarsus with short close-set feathers, with transverse scutellæ in front below. Cere slightly hispid. Outer toe capable of changing its direction. Tail rounded. Claws curved with a deep internal groove.

THE BROWN OR BALD EAGLE.

Haliaetos leucocephalus.

PLATE I. FIG. 1 (Female).

(STATE COLLECTION. Male & Female).

Falco leucocephalus. Wils. Orn. Vol. 4, p. 89, pl. 36 (adult male).
Sea Eagle. Id. Ib. Vol. 7, pl. 55, fig. 2 (young).
F. leucocephalus. Nutt. Man. Vol. 1, p. 72 (male).
Aquila (Haliaëtos) id. Rich. & Sw. F. B. A. Vol. 2, p. 15. Bonap. Comp. and Geographical List, p. 3.
White-headed or *Bald Eagle.* Aud. B. of A. 8vo. Vol. 1, p. 80, pl. 14 (male).
Bald Eagle, H. leucocephalus. Giraud, Birds of Long Island, p. 9.

Characteristics. Brown. Head and tail (of males) white. Tail reaching beyond the wings. Bill, feet and irides pale yellow. *Female* : Beak bluish black. Tail with a few light spots on the upper surface. *Young*, irregularly varied with dark and pale brown. Length 3 feet.

Description. Bill curved regularly from the cere to the tip : an obtuse and scarcely prominent lobe on the cutting margin of the upper mandible ; and beyond this, the bill suddenly curves downward. Primaries acute ; the fourth longest. Tail rounded. Claw of the hind toe largest.

Color. *Adult male :* Head and upper part of the neck, the tail and its coverts, white ; remaining parts of the body chocolate-brown. Bill and tarsus yellow ; cere light blue. *Female* : Chin and upper part of the breast white ; a small portion of the upper part of the tail powdered with white. *Young :* Dull brown varied with white. Tail brownish black, mottled with white.

Length, 36·0 – 40·0. Extent of wings, 84·0. Weight, 8 – 12 lbs.

This noble bird is found in every part of the United States, feeding upon fish, wild fowl and small quadrupeds. Along the coast it is frequently seen pursuing the *Fish Hawk*, and, compelling him to drop his prey, seizes it before it touches the water. It builds its nest in trees, and lays two or three dull white unspotted eggs. Although birds of prey are seldom gregarious, yet I have known them to appear in flocks of 15 – 20 on the marshes near the seacoast on Long island, after a violent northeast storm. The inhabitants, on such occasions,

approach them on horseback, and after killing many outright, dispatch the remaining wounded ones with clubs. Its nest has been noticed in the neighborhood of New-York. It is accidental in the northern parts of Europe. In this country, it ranges from Mexico to the 62d parallel of latitude.

(*EXTRA-LIMITAL.*)

H. washingtoni. (Aud. B. of A. 8vo. Vol. 1, p. 53, pl. 13.) Blackish brown, with a metallic tint. Throat, breast and belly brownish yellow; each feather streaked with brown. Length, 42; alar extent, 122. *Western States.*

GENUS PANDION. Savigny.

Upper ridge of the bill straight towards the base, with a slight lobe on its cutting edge. Tarsus short, naked, covered with hexagonal scales. Feathers above short and narrow.

THE AMERICAN FISH HAWK.

Pandion carolinensis.

PLATE VIII. FIG. 18.

(STATE COLLECTION.)

Falco carolinensis, Gmelin; and *Fish Hawk,* Wilson, Am. Orn. Vol. 5, p. 1, pl. 37.
Falco haliaëtus. Aud. pl. 81 (male); Orn. Biog. Vol. 1, p. 415.
Fish Hawk. Nuttall, Manual, Vol. 1, p. 78, figure.
Aquila (*Pandion*) *haliœeta.* Richardson, F. B A. Vol. 2, p. 20.
Fish Hawk or *Osprey.* Aud. B. of A. 8 vo. Vol. 1, p. 64, pl. 15 (male).
P. carolinensis. Bonap. Comp. List, p. 3.
P. haliaëtus, Fish Hawk. Giraud, Birds of Long Island, p. 11.

Characteristics. Dark brown above; beneath white. Cere and feet blue. *Female:* Breast sparsely spotted with light brown. *Young:* Feathers above margined with yellowish white. Length, 24·0.

Description. Edge of the upper mandible straight to its hooked tip, excepting a slight angular elevation near the corner of the mouth, and a slightly elevated lobe near the middle. The folded wings slightly exceed the tail. Second primary longest. Tail slightly rounded. Legs feathered in front half an inch below the joint. Middle claw with an obsolete groove beneath; the others rounded.

Color. Above dark brown; the margins of the feathers paler. On the summit of the head, the long feathers are white, darker in the centre, and erectile at pleasure. A dark brown stripe runs from the base of the bill through the orbits and along the sides of the neck,

occasionally ascending and encircling the lower part of the neck. Inner vanes of the primaries whitish barred with brown. Tail light brown, with 6 – 8 interrupted darker bars. Beneath white, regularly tinged with brown. Cere and feet blue. Irides yellow. Bill bluish black. *Female* with less white on the head, and a few brownish spots on the breast. *Young:* The feathers bordered above with yellowish white.

Length, 21·0 – 24·0. Alar extent, 50·0 – 60·0.

The *American Fish Hawk* or *Osprey*, occurs in every part of the State, and breeds in the vicinity of fresh or salt water. It constructs a large nest of sticks and seaweed, in which it deposits 3 – 4 dull white eggs, thickly spotted with brown. It feeds exclusively on fish and other aquatic animals: it is therefore harmless, and should claim the protection of the farmer; but he so closely resembles his congeners, that he usually shares their fate. Until recently he has been confounded with the Osprey of Europe, and Bonaparte has restored the almost forgotten name given to it by Gmelin. It ranges from Cayenne to the 60th parallel of north latitude, and is peculiar to America.

GENUS BUTEO. Bechstein.

Beak short and small, and bent from the base. Cere short. Lores covered with bristles. Tarsus long, scutellate, feathered half way down or more. Feathers of the thigh long and pendulous. Fourth primary longest; the first four cut out on the inner web. Outer toes connected by a membrane.

THE ROUGH-LEGGED BUZZARD.

Buteo sancti-joannis.

PLATE II. FIG. 3 (Female).

(STATE COLLECTION. Male & Female.)

Rough-legged Falcon. Wils. Orn. Vol. 4, p. 59, pl. 33, fig. 1 (young); and Vol. 5, p. 216 (adult and young).
Black Hawk. Id. Ib. Vol. 6, p. 82, pl. 53, fig. 1.
F. lagopus et *St. Joannis.* Bonap. Am. Lyc. Nat. Hist. N. Y. Vol. 2, p. 32.
F. id. Aud. pl. 166 (young male), pl. 422 (adult); Orn. Biog Vol. 2, p. 377.
F. id. Nuttall, Man. Orn. Vol. 1, p. 97.
Rough-legged Buzzard. Richardson, F. B. A. Vol. 2, p. 52, pl. 58.
Butaëtes Sancti-Joannis. Bonap. Geographical and Comp. List, p. 3.
Rough-legged Buzzard, B. lagopus. Aud. B. of A. 8vo. Vol. 1, p. 46, pl. 11.
B. lagopus. Giraud, Birds of Long Island, p. 6.

Characteristics. Black and rusty. A dark broad belt across the belly. Tail white at base, dark brown towards the tip, where it is margined with white. *Female*, lighter colored. *Young:* Spots in place of the belt; tail with three bands. Length, 22 inches.

Description. Bill compressed; edge of upper mandible slightly undulated. Eyebrows prominent; third quill longest; fourth nearly equal. Tail moderately rounded. Tarsi thickly covered with short feathers, which project over the insertion of the toes. Wings reaching nearly to the tail.

Color. Mostly black and chocolate-brown. Head and upper parts of the neck and body streaked with brownish black. Upper surface of wings black or brown. Belt across the belly dark, often black. Upper tail-coverts white, with interrupted bars of black or brownish black. Feathers on the thighs light reddish brown, with angular spots of dark brown. Breast pale yellowish, with interrupted streaks of light brown. Bill bluish black. Cere yellow.

Length, 20·0 – 25·0.

This species exhibits such variations in its plumage, as to have occasioned some confusion among systematic writers. It was originally described by Gmelin and Latham as a distinct species, *F. S. Joannis*. Wilson described one form as identical with *F. lagopus* of Europe, in which he was followed by all ornithologists down to 1838, when Bonaparte separated it from that species. The other form was described as new, under the name of *niger*, and so received until Bonaparte confirmed Wilson's previous suspicions by arranging it under its present name; leaving, however, the old name of *lagopus* to stand, and thus making two nominal species, which, however he finally united into one.

The *Rough-legged Buzzard*, or *Black Hawk*, is a northern species, rarely found beyond Carolina. In this State, where it is often called the *Marsh Hawk*, it is rarely seen except in the autumn and winter, proceeding northward in the spring, and has been observed as high as the 68th parallel of north latitude. Its usual haunts are low grounds, where it preys upon mice, small birds, frogs, etc. Its flight is low and leisurely, and it appears to be more nocturnal in its habits than any other species of the family.

THE RED-TAILED BUZZARD.

BUTEO BOREALIS.

PLATE VIII. FIG. 17 (YOUNG).

(STATE COLLECTION. FEMALE.)

Falco borealis. GMELIN.
Red-tailed Falcon. PENN. Arct. Zool. Vol. 2, p. 205.
Red-tailed Hawk. WILS. Orn. Vol. 6, p. 75, pl. 52, fig. 2 (adult male).
White-breasted Hawk. ID. Ib. Vol. 6, p. 78, pl. 52, fig. 1 (young).
Falco borealis. AUDUB. B. of A. 8vo. pl. 7 (male and female); Orn. Biog. Vol. 1, p. 265; Vol. 5, 378.
F. id. NUTTALL, Man. Orn. Vol. 1, p. 102. RICHARDSON, Fauna Bor. Am. Vol. 2, p. 50.
Buteo borealis, Red-tailed Hawk or *Buzzard.* GIRAUD, Birds of Long island, p. 3.

CHARACTERISTICS. Dusky; whitish beneath, with dark hastate spots. Tail light reddish, with a black subterminal band. *Young:* Tail dusky brown, with several narrow blackish bands. Length, 20 inches.

DESCRIPTION. Head large and flattened. Bill rather straight from the base; tip much incurved. Upper mandible broadly lobate on its cutting edge. Third, fourth and fifth primaries subequal; the fourth longest. Legs feathered two inches below the joint in front; naked behind. Tail nearly even or very slightly rounded, extending two inches beyond the closed wings.

COLOR. Above, dark brown, with the margins of the feathers lighter; beneath, the throat and breast white, with a few short dark longitudinal streaks: in the adult, these are rust-colored. Thigh-feathers white, with short interrupted transverse brown bars. Tail light reddish brown, with a narrow black band in the male; tip light colored. Bill light blue, passing into black at the tip. Irides dark hazle. Cere and feet yellow.

Length, 20·0 – 24·0.

The *Red-tail*, *Hen Hawk* and *Hen Harrier*, by which names it is designated, resides in our State during the whole year. It preys on the smaller quadrupeds, but is better known by its frequent swoops into the poultry yard. It ranges from Mexico to the 58th parallel, and is peculiar to this continent.

THE RED-SHOULDERED BUZZARD.

Buteo hyemalis.

PLATE VI. FIG. 13.

(STATE COLLECTION. Male, female and young.)

Falco borealis et *lineatus*. Gmelin.
Red-shouldered Hawk. Penn. Arct. Zool. Vol. 2, p. 206.
Winter Falcon. Wils. Orn. Vol. 4, p. 73, pl. 35, fig. 1 (adult.)
F. lineatus. Id. Ib. Vol. 6, p. 86, pl. 53, fig. 3 (young male).
F. (Circus) hyemalis. Bonap. Am. Lyc. N. Y. Vol. 2, p. 33.
Winter Falcon. Nutt. Man. Vol. 1, p. 106.
Red-shouldered Hawk. Audubon, B. of A. Vol. 1, p. 40, pl. 9 (male and female).
Buteo lineatus, Red-shouldered Hawk. Giraud, Birds of Long island, p. 7.

Characteristics. Brown and ferruginous. Wings and tail black; the former spotted. Shoulder of the wings reddish. Tail black, with five bands of white. *Young:* Beneath white spotted with brown.

Description. Bill stout, compressed. Head depressed. Legs feathered a little below the knees. Claws highly curved, and very sharp. Third and fourth primaries subequal, longest. Tail long, slightly rounded. Feathers of the thighs elongated behind.

Color. Head, neck and back reddish brown. Wing-coverts and secondaries light brown, thickly spotted with white. Quills nearly black, spotted with white. Under wing-coverts reddish. Tail with from five to seven narrow white transverse bands, and tipped with white. Thigh-feathers light brown, spotted or transversely barred with brown. Beneath reddish brown, with longitudinal streaks of pale brown on the breast. Beak bluish at base, black at tip. Cere, eyelids and feet yellow. Iris hazel.

Length, 19·0 – 21·0.

The *Red-shouldered Buzzard*, or *Winter Hawk*, breeds in the Southern States; and although it has been noticed as far north as the 57th parallel, it rarely passes the State of New-York along the Atlantic coast. It builds its nest in trees, and lays four or five bluish eggs, faintly blotched with reddish at the smaller end. Preys on the smaller birds and quadrupeds. Peculiar to this continent.

THE BROAD-WINGED BUZZARD.

BUTEO PENNSYLVANICUS.

PLATE V. FIG. 11.

Falco pennsylvanicus. WILS. Orn. Vol. 6, p. 92, pl. 54, fig. 1 (male).
F. latissimus. ORD, reprint of Wilson.
Astur pennsylvanicus. BONAP. Am. Lyc. Vol. 2, p. 29.
Broad-winged Hawk. NUTT. Man. Vol. 1, p. 106. AUD. Orn. Biog. Vol. 1, p. 461; Vol. 5, p. 377. ID. B. of A. Vol. 1, p. 43, pl. 10 (male and female).
Broad-winged Buzzard. GIRAUD, Birds of Long island, p. 5.

CHARACTERISTICS. Dusky above; whitish tinged with reddish beneath, thickly spotted with brown. Tail white, with two bars of black tipped with whitish or brown. Length, 14 inches.

DESCRIPTION. Bill short, as broad as long; the dorsal outline curved nearly from the base, much curved at the tip: a broad rounded lobe on the edge. Nostrils oval, oblique. Legs long, with scutellæ before and behind. Middle toe longest; the outer connected at the base by a membrane, and shorter than the inner. Space between the bill and eye hispid. Wings very broad; the fourth primary longest. Tail long, broadly rounded.

COLOR. Bill bluish black; cere and margin yellow. Iris hazel. Feet yellow. Dark umber above: forehead with a slight margin of whitish. Cheeks whitish. Beneath light reddish, with arrow-headed brown spots, which are also observed on the feathers of the thigh.

Length, 14·0. Alar extent, 32·0.

This is a rare species in our State, although Mr. Bell informs me that he killed several, in one day, in Rockland county. In Virginia and Maryland, it is more common. It breeds in Ohio. Its geographical range appears to be between the 31st and 46th parallels. Its western range is unknown, but believed to be circumscribed. Peculiar to America.

(*EXTRA-LIMITAL.*)

B. vulgaris. (AUD. B. of A. Vol. 1 p. 30, pl. 6.) Chocolate-brown above; beneath yellowish white barred with brown. Tail with ten dusky bars. Length, 23 inches. *Columbia River.*

B. harlani. (AUD. Ib. Vol. 1, p. 38, pl. 8.) Deep chocolate-brown throughout. Tail with 6 – 7 narrow dusky bars. Length, 21 inches. *Louisiana.*

B. harrisi. (AUD. Ib. Vol. 1, p. 25, pl. 6.) Brownish black. Wing-coverts and feathers of the thigh reddish brown. Tail black, white at the base and extremity. Length, 24 inches. *Louisiana.*

GENUS NAUCLERUS. Vigors.

Bill short, wide at the base, slightly festooned on its cutting edge. Tarsus short, equal in length to the hind toe, thick, scaly all round. Wings and tail extremely long; the latter deeply forked. Third primary longest. Plumage glossy.

THE SWALLOW-TAILED HAWK.

Nauclerus furcatus.

PLATE VII. FIG. 15.

(CABINET OF THE LYCEUM.)

Falco furcatus. Wilson, Am. Orn. Vol. 6, p. 70, pl. 51, fig. 2 (Adult male).
F. (Elanus) id. Bonap. Am. Lyc. Vol. 2, p. 31.
Nauclerus furcatus. Vigors, Zool. Jour. Vol. 2, p. 386.
F. furcatus. Aud. Orn. Biog. Vol. 1, p. 368; and Vol. 5, p. 371.
Kite. Nuttall, Manual, Vol. 1, p. 94, figure.
Swallow-tailed Hawk. Aud. B. of A. Vol. 1, p. 78, pl. 18 (male).
Swallow-tailed Hawk. Giraud, Birds of Long island, p. 13.

Characteristics. White. Wings and tail black. Legs plumbeous. Length, 25 inches.

Description. Wings very long and acute; the secondaries comparatively very short. Tail of 12 feathers, the lateral ones being excessively elongated.

Color. Head, neck, and all beneath white tinged with grey; the shafts of the feathers on the head and neck dark colored. The black of the back, wings and tail glossed with purplish reflections. Bill bluish black. Cere, feet and eyelids blue.

Length, 25·0. Alar extent, 54·0.

The *Swallow-tailed Hawk*, or *Fork-tail*, is a southern species, and appears in the Southern States in the spring. They are numerous in Florida, Louisiana and Mississippi. The specimen exhibited in the plate was shot in the neighborhood of New-York, where, however, it can only be regarded as a rare and accidental visiter. Along the seacoast, it rarely passes beyond the 37th degree; but in the interior, it has been observed at the Falls of St. Anthony, in the 44th degree of north latitude. Some years since, they were numerous in Ohio, but have now disappeared. Its ordinary food consists of snakes, lizards and other reptiles. Major Le Conte informs me, that when the fields are burned at the South, many of these hawks immediately appear hovering over the smoke, in pursuit of the winged insects which are driven upwards by the heated currents of air. Occasionally they swoop down after rabbits and snakes, which are endeavoring to escape from the flames.

(*EXTRA-LIMITAL.*)

Genus ELANUS, *Savigny.* Bill short, with an obtuse lobe, cleft behind the eyes. Tarsus very short, feathered on one half its length, covered on the remainder with small rounded scales. Toes short, cleft to the base. Wings long and pointed; second primary longest.

E. leucurus, BONAP. (*E. dispar* of AUD. B. of A. Vol. 1, p. 70, pl. 16.) Bluish grey; wing-coverts black. Tail emarginate. Length, 16 inches. *Southern States.*

Genus ICTINIA, *Vieillot.* Bill angularly lobed on its upper mandible; lower distinctly notched. Cere glabrous. Tarsus scutellate in front. Outer toe connected at base by a membrane. Third primary longest.

I. plumbea. (AUD. Ib. Vol. 1, p. 73, pl. 17.) Dark slate; head, neck and beneath lighter; tail black and long. Length, 14 inches. *Southern States.*

GENUS FALCO. LINNÆUS.

Bill stout and short, arched from the base. Cere short, bare. Upper mandible with a festoon and a prominent angular process. Nostrils round, with an internal ridge ending in a central tubercle. Tarsi moderate, reticulate: toes long, scutellate; the exterior webbed at the base. Second primary longest; first and third nearly equal.

THE DUCK HAWK.

FALCO ANATUM.

PLATE III. FIG. 8 (OLD MALE).

(STATE COLLECTION.)

Great-footed Hawk. WILS. Orn. Vol. 9, p. 120.
The Wandering Falcon. NUTTALL, Manual, Vol. 1, p. 53. RICHARDSON, F. B. A. Vol. 2, p. 23.
Falco peregrinus. AUD. B. of A. Vol. 1, p. 84, pl. 20 (male and female).
F. anatum. BONAP. Comparative List, p. 4.
F. peregrinus. GIRAUD, Birds of Long Island, p. 14.

CHARACTERISTICS. Brownish black; beneath black, transversely barred with blackish brown. Cheeks with a dilated black spot. Middle toe as long as the tarsus. Length, 19 inches.

DESCRIPTION. Lower mandible truncated at tip. Nostrils round, with a central point. Inner web of the first primary abruptly cut out near the tip. Eyebrows very prominent. Toes very robust; middle toe as long as the tarsus: the claw of the hind toe largest.

Color. Bill bluish; darker at the tip. Summit of the head uniform dark brown. Space round the eyes, legs and cere yellow. Iris hazel. Dark blackish brown above. Wings pale ash. Tail-coverts plumbeous, with heart-shaped blackish brown marks. Tail barred alternately with deep brown and slate, tipped with whitish. Chin and throat white unspotted; fore part of the breast with a few drop-shaped streaks. Transverse interrupted brown bars on the flanks and belly. Thigh-feathers barred, or with arrow-head spots of brown. Under tail-coverts with distant interrupted bars or spots. The black on the sides of the head advances on the cheek below the eyes, and forms a sort of notch or sinus on the sides of the neck: this contrasts strongly with the white of the neck, and forms a very characteristic specific mark. *Female:* Breast inclines more to buff; darker above. *Young:* Feathers above edged with rusty; beneath entirely white, with a central oblong brownish mark on each feather.

Length, 15·0 – 18·0. Alar extent, 30·0 – 44·0.

I have followed Bonaparte in considering this species as distinct from its closely allied congener, the *Peregrine Falcon* of Europe. It is frequently taken in various parts of the State, and known under the various popular names of *Hen Hawk*, *Chicken Hawk* and *Pigeon Hawk*. It is said to breed in Cedar swamp, New-Jersey, and perhaps in this State. It has a wide geographical range, being found from 54° south to 74° north latitude.

Its usual food consists of birds, which are struck on the wing. When falconry formed the chief amusement of the princes and nobility of Europe, a species so closely allied to the Duck Hawk as to have been hitherto confounded with it, was that chiefly employed.

THE PIGEON HAWK.

FALCO COLUMBARIUS.

PLATE IV. FIG. 9 (MALE).

(STATE COLLECTION. MALE & FEMALE.)

Falco columbarius. LIN. 12 ed. p. 128.
Pigeon Hawk. WILS. Orn. Vol. 2, p. 107, pl. 15. fig. 3 (male).
Little Corporal Hawk. AUDUBON, folio, pl. 92 (young); pl. 75 (young). NUTTALL, Manual, Vol. 1, p. 60.
Pigeon Hawk. AUD. Orn. Biog. Vol. 1, p. 466 and 381; Vol. 5, p. 368. ID. B. of A. Vol. 1, p. 88, pl. 21 (male and female).
Falco columbarius. GIRAUD, Birds of Long Island, p. 17.

CHARACTERISTICS. Dusky; beneath whitish, with interrupted stripes. Tail with 4 – 6 narnow bands. Under side of wings varied with black and rust-color. Length, 11 inches.

DESCRIPTION. Bill curved and notched as in preceding species. Wings, when folded, reaching to within an inch of the tail, which is slightly rounded. Third primary longest. Thigh-feathers long. Tarsus reticulated.

COLOR. Whole upper parts dusky, except the tail, which is of a darker hue, and barred with white and slaty bluish white. Chin and throat white. Sides of the head, breast, thigh-feathers and under tail-coverts reddish brown, with dark drop-shaped streaks. Irregular brown or whitish bars on the under side of the primaries. Bill bluish at the base, darker at the tip; cere greenish; legs yellow. *Young:* Head reddish brown streaked with dusky. *Female*, darker, with some white on the hind part of the head.

Length, 10·0 – 12·0. Alar extent, 22·0 – 25·0.

This species has been termed the *Bullet Hawk*, in allusion to its swiftness. It occurs over the Union, and has also been seen in Texas. It is, however, a northern bird, ranging to the 65th degree. It is not uncommon in this State, several having been brought to me in a season. It does not, however, as far as I have ascertained, breed here. It is usually observed most numerous in the autumn, when birds are preparing for their annual emigrations. Peculiar to America.

THE AMERICAN SPARROW HAWK.

FALCO SPARVERIUS.

PLATE VII. FIG. 16.

(STATE COLLECTION. MALE & FEMALE.)

American Sparrow Hawk. WILS. Orn. Vol. 2, p. 117, pl. 16, fig. 1 (female); and Vol. 4, p. 57, pl. 32, fig. 2 (male). NUTTALL, Manual, Vol. 1, p. 58.
Little Rusty-crowned Falcon. RICHARDSON, F. B. A. Vol. 2, p. 31, pl. 24 (male).
Sparrow Falcon. AUD. B. of A. Vol. 1, p. 90, pl. 22 (male and female).
Cerchneis sparverius. BONAP. Geographical and Comp. List, p. 5.
Sparrow Hawk, F. sparverius. GIRAUD, Birds of Long Island, p. 16.

CHARACTERISTICS. Crown, back and tail reddish; wings slate blue; beneath whitish spotted with black; cheeks white, with irregular black marks. Tail with a white subterminal band. *Female* and *young* with the tail many-banded. Length, 12 inches.

DESCRIPTION. Bill much curved, with a slight indentation on the upper mandible, and anterior to that a sharp tooth fitting into a corresponding cavity in the lower mandible, which is truncated at the tip. Nostrils oval, with a central column. Second or third primary longest. Tail rounded. Tarsus reticulate. Toes scutellate; under each joint a rounded elevation. Wings shorter than the tail.

COLOR. Bill and supraorbital space bluish grey. Crown of the head orange brown. Back and upper part of tail bright ferruginous. Tail with a broad black subterminal band, tipped with white or yellowish white. Lateral tail-feathers white, spotted with black. 5 – 7 irregular black spots surrounding the head. Chin, throat, and all beneath white or cream-colored; the flanks and sides of the breast with arrow-head and rounded brownish spots. Underneath the wings, spotted; the primaries barred with brown. *Female*, entirely reddish brown above, barred with black. Tail with 10 – 12 black bars. *Young* resembles the female.

Length, 10·0 – 12·0. Alar extent, 20·0 – 23·0.

This common and well known little falcon has a wide geographical range. It has been found from the 54th degree of south latitude, to the same degree north. It scarcely ever builds a nest, but occupies those of other birds, laying 5 – 7 buff-colored eggs with dark blotches. A few remain in this State during the whole winter. It feeds on smaller birds, but chiefly on quadrupeds, reptiles and insects. It is easily tamed. Peculiar to America.

(*EXTRA-LIMITAL.*)

F. gyrfalco. (AUD. B. of A. Vol. 1, p. 81, pl. 19.) White, with arrow-head black spots; bill and feet yellow. Length, 24 inches. *Labrador.*

GENUS ASTUR. Bechstein.

Edge of the upper mandible with an obtuse lobe, succeeded by a broad sinus. Tarsi moderate or slender, scutellate before and behind, feathered one third of their length. Third toe longest, connected at base by a membrane. Wings broad; fourth and fifth primaries longest. Tail rounded, long.

THE SLATE-COLORED HAWK.

Astur fuscus.

PLATE II. FIG. 2 (Young male).

(STATE COLLECTION. Old female and young.)

Falco fuscus. Gmelin.
F. velox. Wils. Orn. Vol. 5, p. 116, pl. 45, fig. 1 (young female).
F. pennsylvanicus. Id. Ib. Vol. 6, p. 13, pl. 46, fig. 1 (adult male).
F. fuscus. Bonap. Am. Lyceum Nat. Hist. N. Y. Vol. 2, p. 443.
Accipiter velox. Audubon, folio, pl. 364.
Accipiter fuscus. Bonap. Geog. and Comp. List, p. 5.
Sharp-shinned Hawk. Aud. B. of A. Vol. 1, p. 100, pl. 25 (male and female).
Astur fuscus. Giraud, Birds of Long island, p. 19.

Characteristics. Slate-colored above. Tail with four dark bands, tipped with white. Beneath whitish, with interrupted rusty bars. Tarsus very slender. Length, 10 – 14 inches.

Description. Wings about three inches shorter than the tail, which is nearly even, slightly emarginate. Tarsus very slender, compressed, two inches long. Female much larger than the male.

Color. Bluish grey above. Dark spots on the under side of the wings. Irides red. Feet yellow. Chin and throat white, with a few dark streaks. Breast and all beneath with light brown interrupted bars, assuming the shape of arrow-head spots. Tail with 3 – 5 dark bars; the last broadest. Tip of the tail white; its underside white, with interrupted light brown bars. *Young:* Brown above, spotted with white; beneath white; each feather with an oblong brown spot.

Length, 10·0 – 15·0. Alar extent, 20·0 – 25·0.

This swift and daring little hawk ranges from the 54th degree of north latitude to Mexico. It breeds in the Western States, laying from 4 – 5 white eggs thickly covered with reddish blotches, and is noted for its attacks on the poultry yard. It feeds on birds, reptiles and insects. Peculiar to America.

COOPER'S HAWK.

Astur cooperi.

PLATE IV. FIG. 5 (ADULT MALE).

(STATE COLLECTION. YOUNG MALE.)

Falco cooperi. BONAP. Lyceum Nat. Hist. N. Y. Vol. 2, p. 433.
F. id. ID. Am. Orn. Vol. 2, pl. 10, fig. 1 (young).
F. stanlei. Stanley's Hawk. AUDUBON, folio, pl. 36, 141; Orn. Biog. Vol. 1, p. 189; and Vol. 2, p. 265.
Falco stanlei. NUTTALL, Manual, Vol 1, p 91.
Cooper's Hawk. AUDUBON, B. of A. Vol. 1, p. 98, pl. 24 (male and female).
F. cooperi. Cooper's Hawk. KIRTLAND, Zool. of Ohio, p. 179.
Astur cooperi. GIRAUD, Birds of Long island, p. 20.

CHARACTERISTICS. Bluish grey above; tail barred and distinctly rounded. *Young*, dusky brown, spotted with white. Larger than the preceding. Length, 20 inches.

DESCRIPTION. Bill robust, curved from the base, and abruptly so at the tip. Tail eight inches long, and extending five inches beyond the wings. Legs slender, 2·7 long, and, with the toes, not reaching the tip of the tail; inner and hind claw largest. Tail rounded.

COLOR. Above bluish grey; beneath reddish or white and reddish, with rust-colored transverse bars. Primaries reddish brown, crossed occasionally with blackish bands. Thigh-feathers with brown bars or arrow-head spots. Tail inclining to slate-grey, with four broad blackish brown bands, and broadly tipped with white. Cere and legs yellow. Bill bluish, passing into black at the tip.

Length, 18·0 – 22·0. Alar extent, 30·0 – 32·0.

This species, which had been previously confounded with the preceding, was first detected as distinct by Charles Bonaparte. It is a bold and swift bird, attacking chiefly the smaller birds. Breeds in the mountainous districts of the Northern and Middle States, laying 3 – 4 round, rough, white eggs. Its geographical range appears to be confined between the 29th and 41st parallels, being seldom found north of this State.

THE AMERICAN GOSHAWK.

ASTUR ATRICAPILLUS.

PLATE II. FIG. 4 (ADULT). FIG. 5 (YOUNG MALE).

(STATE COLLECTION. COLLECTION OF MR. GIRAUD.)

Falco atricapillus. WILS. Orn. Vol. 6, p. 80, pl. 52, fig. 3.
Goshawk. AUD. Orn. Biog. Vol. 2, p. 241; folio, plate 141.
F. (Astur) palumbarius. BONAP. Am. Lyc. N. Y. Vol. 2, p. 28.
Ac. (Astur) palumbarius. RICHARDSON, F. B. A. Vol. 2, p. 39, pl. 26.
American Goshawk. NUTTALL, Manual, Vol. 1, p. 85.
Astur atricapillus. BONAP. Comp. List, p. 5.
Astur id. AUD B. of A. Vol. 1, p 95, pl. 23 (adult male and young).
Astur palumbarius. GIRAUD, Birds of Long island, p. 18.

CHARACTERISTICS. Dark blue-black above; line over the eyes white; beneath grey on a light ground. Tail deeply rounded. *Female* and *young*, brown above; lighter beneath, with oblong brown spots. Length, 24 inches.

DESCRIPTION. Nostrils suboval, large. Fourth primary longest. Tips of the wings not reaching within six inches of the end of the tail. Inner webs of the primaries, from the second to the seventh, cut out.

COLOR. Bluish grey or blackish above; darker on the wing-coverts, where the feathers are margined with white. Sides of the head tinged with rufous, with dark oblong spots or a large blotch from the eye to the shoulder: a whitish streak over the eye. 2 – 4 narrow black bars on the upper surface of the primaries, which are tipped with white. Tail light brown, with bars of darker brown; each bar margined on each side with white: end of tail white. Beneath whitish, but covered with so many longitudinal and transverse bars of grey as to assume that general color. Cere, space round the eye, and legs yellow. *Female* and *young:* Brown above; the feathers edged with white. Head and neck rufous, streaked with brown. Beneath white tinged with rufous, with drop-shaped streaks of brown.

Length, 22·0 – 24. Extent of wings, 40·0 – 45·0.

This species, as will be perceived, varies very much with age and sex in its markings. It has been questioned whether this is identical with the *Goshawk* of Europe. Wilson was unable to compare it directly with that species, but decided to consider it as new. Bonaparte, in the *Annals of the Lyceum*, cited above, supposed it to be the same, and refers to a plate in his forthcoming *Ornithology*, which, however, never appeared. In this opinion he was followed by Audubon and Richardson. Swainson, on the other hand, believes the American to be a distinct species, and the differences are pointed out in Jardine's octavo edition of Wilson, and in Nuttall's Manual. I coincide in opinion with Nuttall in considering it as a distinct species, but closely allied to the European Goshawk, so renowned in the annals of falconry. Since the above was written, I perceive that Bonaparte regards this species as distinct.

The *American Goshawk* is a northern bird, but is found in almost every State as far south as Louisiana. Richardson states them to be found as high as 68° north. It preys on ducks, pigeons, hares, etc. Audubon has observed them breeding at Niagara. Their nests are constructed on lofty trees, and contain four bluish white granulated eggs. Peculiar to America.

GENUS CIRCUS. Bechstein.

Bill much compressed, terminating in a long and acute hook: lobe on the cutting margin distinct. Nostrils large, oblong, covered in part by hair, with an oblique ridge from their upper edge. Lores hairy. Tarsi long, scutellate before and behind, partly feathered. Plumage soft. A ruff of narrow feathers on each side behind the eye. Ear-openings large. Tail long, nearly even.

THE MARSH HARRIER.

Circus uliginosus.

PLATE III. FIG. 6 (Male) FIG. 7 (Female).

(STATE COLLECTION.)

F. uliginosus. Wils. Orn. Vol. 6, p. 67, pl. 51, fig. 3 (female).
F. (Circus) cyaneus. Bonap. Ann. Lyc. N. Y. Vol. 2, p. 33.
F. id. Id. Am. Orn. Vol. 2, p. 31, pl. 12 (male).
Hen Harrier. Nuttall, Man. Orn. Vol. 1, p. 109.
Buteo (Circus) cyaneus. Richardson, F. B. A. Vol. 2, p. 55, pl. 29 (male).
Marsh Hawk. Aud. fol. pl. 356. B. of A. Vol. 1, p. 105, pl. 26 (male and female).
Strigiceps uliginosus. Bonap. Comp. List, p. 5.
Circus cyaneus. Giraud, Birds of Long island, p. 21.

Characteristics. Bluish grey above; white, spotted with brown, beneath. Third and fourth primaries equal. *Female* and *young*, reddish brown; beneath rusty with spots. Length, 20 inches.

Description. Tarsus with short feathers in front for nearly an inch. A row of stiff bristles curving up over the base of the bill, and nearly concealing the nostrils. Tail almost even, or very slightly rounded.

Color. Bluish grey above, with dark brown primaries; beneath light blue or white, with scattering light reddish brown spots. Tail beneath light colored, with 3–4 obsolete narrow dark bands. Bill blue. Legs yellow. *Female:* Dark brown above, with the feathers bordered with a lighter color; beneath bright reddish brown, with longitudinal broad streaks of a dark brown color. Tail beneath bluish white, with two distant broad bands.

Length, 18·0–22·0. Alar extent, 41·0–47·0.

The *Marsh Hawk*, or *Hen Harrier*, is common over this continent, and extends its migrations from Mexico to the 68th parallel. It makes its nest on the ground, and lays four smooth rounded bluish white eggs. Audubon also describes them as being sprinkled with pale reddish brown spots. Its usual food consists of field mice, and of small serpents, frogs, lizards and other reptiles. It is a constant resident with us during the year, and, as its names imply, is frequently observed skimming over the marshes in search of its prey, and occasionally makes a dash at the poultry yard.

FAMILY STRIGIDÆ.

Beak short, strong, compressed, bent, acutely hooked; its base surrounded by a small cere, almost concealed by incumbent setaceous feathers. Head very large, globular, much feathered. Nostrils rounded, in the anterior edge of the cere. Ear-openings excessively large, simple or operculate. Eyes very large, surrounded by a disk of feathers. Tarsus short, feathered to the toes, of which the outer is versatile. First quills more or less dentated on their outer edge; the third and fourth longest. Plumage soft. The greater part nocturnal.

GENUS SURNIA. Dumeril.

Head small; facial disk incomplete. Tail rather long. Ear-openings oval, moderate, with no operculum. Lower mandible with a sinus on each side. No egrets. Third quill longest; the first scarcely dentated. Diurnal. Connecting this family with the preceding.

THE HAWK OWL.

Surnia funerea.

PLATE IX. FIG. 19.

(CABINET OF THE LYCEUM.)

Hawk Owl. Penn. Arct. Zool. Vol. 2, p. 234.
Strix hudsonica. Wils. Orn. Vol. 6, p. 64, pl. 50, fig. 6.
S. funerea. Sabine, App. Franklin's Journey.
Hawk Owl. Nuttall, Man. Orn. Vol. 1, p. 116, figure.
American Owl. Richardson, F. B. A. Vol. 2, p. 92. Aud. folio, pl. 378; B. of A. Vol. 1, p. 112, pl. 27.

Characteristics. Blackish brown, thickly spotted with white; beneath barred. Tail wedge-shaped, long, with several lighter bars. Feet thickly feathered and barred. *Female* larger, with the tints not so clear. *Young*, rusty brown. Length, 17 inches.

Description. Bill short, curved from the base, and nearly concealed by the bristly feathers. Third and fourth primaries subequal. Middle feathers of the tail nearly two inches longer than the outer ones.

Color. Bill yellow, with occasionally yellow spots. Cheeks white or cream-colored. Summit of the head barred, or spotted with black and white. The rudiments of a black curved band over the eye, and two other black spots on each side of the neck, which vary,

however, in different individuals; the black band over the eye uniting with the anterior spot, and forming a circular band on the sides of the neck, and the posterior spot becoming an angular mark. Above, confusedly blotched with white. Beneath, with numerous narrow bars, or interrupted streaks of rufous brown. Leg-feathers rufous barred with brown. Tail dark brown, with 6 – 7 narrow curved bars of whitish, and tipped with white.

Length, 15·0 – 18·0.

The *Hawk Owl* is a rare visiter in the State of New-York, except in the more northerly counties. Its usual residence is in high northern latitudes. It is known to breed as low down as Vermont (where it is common), and probably in this State. It has also been observed on the coast of New-Jersey, and, according to Kirtland, in Ohio. It flies about in the daytime more than any other species. It feeds on mice and the smaller birds. It has been observed as high as the 68th parallel, and is common to the northern parts of both continents.

THE SNOWY OWL.

Surnia nyctea.

PLATE IX. FIG. 20 (Female).

(STATE COLLECTION.)

Strix nyctea. Wilson, Orn. Vol. 4, p. 53, pl. 32, fig. 1 (male).
Surnia nyctea. Bonap. Ann. Lyc. N. Y. Vol. 2, p. 36.
Snowy Owl. Nuttall, Man. Orn. Vol. 1, p. 116.
Great Snowy Owl. Richardson, F. B. A. Vol. 2, p 88.
Strix nyctea. Aud. folio pl. 121, (m. and f.); Orn. Biog. Vol. 2, p. 135; B. of A. Vol. 2, p. 113, pl. 28.
Nyctea candida. Bonap. Comp. List, p. 6.
Surnia nyctea. Giraud, Birds of Long island, p. 22.

Characteristics. Large. White, more or less barred with dusky; bill black. An imperfect disk of feathers. Tail moderately rounded. Length, 25 inches.

Description. Bill compressed, nearly concealed among the feathers. Under tail-coverts nearly as long as the tail. Eyebrows somewhat prominent. Tail rounded; the outer feathers about an inch shorter than the central ones. Hind claw shortest. Leg-feathers long and hair-like.

Color. White, sometimes entirely so. Wings and breast marked with crescent-shaped spots of deep and light brown, forming interrupted bars. Tail white, with 5 – 6 narrow brown bars. Bill and claws black. Irides yellow. *Female:* The whole body, the throat and legs, and all except the facial disk and occasionally the legs, covered with uninterrupted bars of brown. *Young*, rusty brown.

Length, 22·0 – 29·0.

The *Snowy Owl* is not an uncommon visiter among us, and is considered the harbinger of a severe winter. He seems to be gregarious in his migrations, if not in habits; for his appearance in this vicinity is always in considerable numbers at a time. He is diurnal as well as nocturnal, and feeds on fish and the smaller quadrupeds. The *Snow Owl* is abundant in Maine and Massachusetts, and may possibly be found to breed in the most northerly parts of this State. He has been seen in Florida, and has also been observed as high as the 75th degree of north latitude.

This species has been separated from *Surnia* by the Prince of Canino, and placed under a genus NYCTEA. Of this genus, which he has not characterized, I find no account. It certainly exhibits variations from the typical form, in the more distinct disk, shorter legs, prominent eyebrows, and small ear-apertures; but for the present we arrange it as above. The adoption of the specific name *candida* of Latham by the Prince, seems to follow from the generic change. The Snowy Owl is found in the northern parts of both continents.

(*EXTRA-LIMITAL.*)

S.? cunicularia. (AUD B. of A. Vol. 1, p. 119, pl. 31.) Brown, spotted with white. Tail short. Facial disk greyish white. Foot long, slender, with very short feathers. Length, 10 inches. *Trans-Mississippi.*

S.? passerinoides, TEMMINCK. (AUD. B. of A. Vol. 1, p. 117, pl 30.) Very small. Tail long, barred with white. Body olive-brown above, ashen beneath. Head spotted. Length, 7 inches. *Columbia River.*

GENUS BUBO. Cuvier.

Head tufted. Aperture of the ears elliptical, and without an operculum. Bill short, broader than high. Facial disk complete. First quill short; the fourth longest. Tail moderate, rounded. Nocturnal.

THE GREAT HORNED OWL

Bubo virginianus.

PLATE X. FIG. 22 (Female).

(STATE COLLECTION.)

Strix virginiana. Gmelin.
Great Horned Owl. Wils. Orn. Vol. 6, p. 52, pl. 50, fig. 1.
S. (Ulula) virginiana. Bonap. Ann. Lyc. N. York, Vol. 2, p. 37.
Great Horned Owl. Audubon, folio, pl. 61; Ornith. Biog. Vol. 1, p. 313; Vol. 5, p. 393. Nuttall, Man. Ornithol. Vol. 1, p. 124, figures. Richardson, F. B. A. Vol. 2, p. 82. Aud. B. of A. Vol. 1, p. 143, pl. 39 (male and female).
Bubo virginianus. Giraud, Birds of Long Island, p. 27.

Characteristics. Very large. Mottled. Quills and tail-feathers banded with black. Tufts large. Facial disk with concentric circles. Length, two feet.

Description. Bill stout, curved from the base; its cutting margin sinuous. Facial disk not a regular circle. Tail slightly rounded, 3 – 4 inches longer than the tips of the folded wings. Tufts large, and of 10 – 12 feathers.

Color. Above, a general mottled appearance, produced by the intermixture of grey, greyish white, rufous, brown and brownish black. Tufts reddish-brown on their interiors. Facial disk reddish, with an external circle, more or less complete, of blackish. Chin and breast white, with an obscure light or rufous collar encircling the neck. Dusky interrupted transverse bars on the breast and leg-feathers.

Length, 20·0 – 25·0. Alar extent, 56·0 – 60·0.

This is one of the largest of our Owls, and its aspect and dismal tones struck terror into the breasts of our early colonists. It is often called the *Cat Owl*, and builds in trees, laying 3 – 4 white unspotted eggs. It preys on the larger birds, and upon dead fish cast upon the shore, and has a peculiar attachment to the inhabitants of the poultry yard. Found throughout the continent, and has been observed as far north as the 68th degree. Peculiar to America.

THE LITTLE SCREECH OWL.

BUBO ASIO.

PLATE XII. FIG. 25 (ADULT); FIG. 26 (YOUNG).

(STATE COLLECTION.)

Strix nævia, Mottled Owl. WILS. Am. Ornith. Vol. 3, p. 17, pl. 19, fig. 1 (adult).
S. asio, Red Owl. ID. Ib. Vol. 5, p. 83, pl. 42, fig. 1 (young).
S. (Syrnia) asio. BONAP. Lyc. Nat. Hist. N. Y. Vol. 2, p. 36.
Mottled and *Red Owl.* NUTT. Man. Ornith. Vol. 1, p. 121. AUD. folio, pl. 97; Orn. Biog. Vol. 1, p. 486; B. of A. Vol. 1, p. 147, pl. 40 (adult and young).
Scops asio. BONAP. Geographical and Comparative List, p. 6.
Bubo asio, Mottled Horned Owl. GIRAUD, Birds of Long Island, p. 28.

CHARACTERISTICS. Small. Dark brown, mottled, black, brown and grey. Tail even, not longer than the wings. Feet covered with short feathers. *Young*, tawny red. Length 10 inches.

DESCRIPTION. Bill curved from the base. Conch of the ear oval. Feathers on the feet resembling hairy down. Facial circle complete. Tufts erect, and of ten graduated feathers. Tail even.

COLOR. Dark brown, with paler shades, and thickly studded with dark points. Wings spotted with white, and barred with brownish black on a darker ground. Disk bluish. Tail obscurely barred. Iris yellow. Bill and claws bluish horn. *Young:* Bright tawny red; beneath white, with reddish dilated longitudinal streaks on the belly; similar dark brown streaks on the breast; disk or facial circle tawny.

Length, 8·0 – 12·0.

This little owl is not only inoffensive, but useful to the farmer, in clearing his neighborhood of mice and other noxious vermin. It is, I believe, a species exclusively belonging to the Union, and not found beyond its limits. The adult and young of this species have, from the time of Pennant, been considered as distinct, until they were separated by the Prince of Canino in the *Transactions of the Academy of Natural Sciences*, and afterwards in the *Annals of the Lyceum* of New-York. A similar error for a long time prevailed in Europe in relation to the *Syrnium aluco*. A writer in the *Transactions of the Academy of Sciences* of Philadelphia, Vol 8, p. 53, asserts, however, that the color of both young and old is variable and uncertain, or else that they are specifically distinct. He arrives at this conclusion, from having observed the old and young of the Mottled Grey Owl, neither of which had the slightest shade of red about them.

The *Little Screech Owl*, or *Red Owl*, selects the hollow trunk of a tree for its nest, near outhouses: it lays 3 – 4 white rounded eggs. The nestlings are yellowish white. It feeds on mice and insects, and is gentle and inoffensive.

GENUS SYRNIUM. Cuvier.

Head not tufted. Nostrils large, elliptical. Bill convex to the end of the cere, then curved. Ear moderate, with a semicircular operculum covered with hair. Facial disk complete. Tail broad, rounded. Wings large and broad. Tarsus short, and with the toes feathered.

THE GREAT GREY OWL.

Syrnium cinereum.

PLATE XIII. FIG. 29.

(STATE COLLECTION.)

Strix cinerea, Gmelin. Bonaparte, Am. Ornith. Vol. 2, pl. 23, fig. 2. Id. Ann. Lyc. N. York, Vol. 2, p. 436. Nuttall, Man. Ornith. Vol. 1, p. 128.
Cinereous Owl. Richardson, F. B. A. Vol. 2, p. 77.
Great Cinereous Owl. Aud. folio, pl. 351; Orn. Biog. Vol. 4, p. 364. Id. B. of A. Vol. 1, p. 130, pl. 35.

Characteristics. Very large. Dark brown, mottled with whitish. Disk perfect, white, with black concentric circles. Length, 24 – 30 inches.

Description. Wings shorter than the tail, which is wedge-shaped, and extends three inches beyond them. Eyes small.

Color. Dark brown, mottled irregularly with white. The feathers on the upper part of the head with two transverse spots on each web. Primaries rufous brown, with broad darker bands. Tail obscurely barred. Beneath greyish, with dark brown spots, and varied with yellowish. Feet not barred. Disks grey within, and marked with six to nine narrow regular concentric circles. Bill and feet yellow; the former almost hidden in the feathers of the face, of which those on the inner angle of the eye, and around the bill, are black.

Length, 25·0 – 30·0.

The *Great Grey Owl* inhabits chiefly the arctic regions, and is a rare visiter within the Union. It has been observed in Massachusetts, and will doubtless be found within our State, but I have as yet no authentic statement to that effect. It is peculiar to this continent, and its history incomplete.

GENUS OTUS. Cuvier.

With small tufts. Ear-opening exceedingly large, with an anterior semicircular operculum. Bill short, broader than high at base, gently bent at the tip. Nostrils large, oblique. Feet robust, moderately long. Tarsi short, and with the toes feathered. Wings long and broad. Tail short, slightly rounded. Second quill longest.

THE LONG-EARED OWL.

Otus americanus.

PLATE XI. FIG. 24.

(STATE COLLECTION.)

Strix otus. Wilson, Orn. Vol. 6, p. 73, pl. 51, fig. 1.
S. (Ulula) otus. Bonap. Ann. Lyc. N. Y. Vol. 2, p. 37.
Long-eared Owl. Audubon, folio, pl. 383; Orn. Biog. Vol. 4. p. 573. Nuttall, Manual Orn. Vol. 1, p. 130. Richardson, F. B. A. Vol. 2, p. 72.
Otus vulgaris. Aud. B. of A. Vol. 1. p. 136, pl. 37 (male).
Otus americanus. Bonap. Comp. List, p. 7.
Otus vulgaris, Long-eared Owl. Giraud, Birds of Long island, p. 25.

Characteristics. Mottled, einereous, brown and rufous. Tufts long, pointed. Wings scarcely reaching beyond the tail. Length, 15 inches.

Description. Lower mandible slightly sinuous on the cutting edge. Facial disk complete. Tufts elongated, and composed of five or six feathers. Second and third quills subequal. Tail moderately rounded. Legs covered with short feathers to the nails.

Color. Above mottled with yellowish, black, brown and soiled white. Forehead and summit of the head speckled with white. Wings with interrupted bars of black. Facial disk reddish brown, with a dark inner circle near the orbit, more or less complete. Tail greyish, with from six to eight brown bars. Legs buff, nearly unspotted. Throat, breast and belly greyish white, with darkish longitudinal streaks assuming a crucial form on the belly. *Female*, with the throat and face browner. *Young*, reddish white, with transverse blackish lines.

Length, 14·0 – 17·0.

The *Long-eared Owl* is found chiefly in the Eastern and Middle States, where it breeds. It has been seen as far north as 62°. In this State, they are found in remote woods in the winter, and feed on the smaller quadrupeds and birds. It is peculiar to America, and represents here the *Otus vulgaris* of Europe.

THE SHORT-EARED OWL.

OTUS PALUSTRIS.

PLATE XII. FIG. 27.

(STATE COLLECTION.)

Strix brachyotus. WILSON, Am. Orn. Vol. 4, p. 64, pl: 33, fig. 3 (male).
S. (Ulula) id. BONAP. Ann. Lyc. N. Y. Vol. 2, p. 37.
Short-eared Owl. AUDUBON, folio, pl. 372; Orn. Biog. Vol. 5, p. 273. NUTTALL, Manual Orn. Vol. 1. p. 132.
S. (Bubo) brachyota. RICHARDSON, F. B. A. Vol. 2, p. 75.
Otus brachyotus. AUDUBON, B. of A. Vol. 1. p. 140, pl. 38 (male).
Brachyotus palustris. BONAP. Comp. List.
Otus brachyotus. GIRAUD, Birds of Long island, p. 26.

CHARACTERISTICS. Light rufous, with streaks of dark brown. Tufts short, and of 3 or 4 feathers. Wings and tail subequal. *Female*, more rufous. Length, 15 inches.

DESCRIPTION. Bill curved from the base, compressed. Tufts short and inconspicuous. Facial disk complete. Ear-openings with a narrow operculum. Second quill-feather longest; the third shorter. Richardson states the tips of the folded wings to reach within an inch and a half of the end of the tail. In the specimens which I have examined, they appear to be subequal.

COLOR. Above rufous, varied with dark brown in streaks and blotches. Facial disk white or dusky brown, the part near the eye being black. Wings mottled, and barred with dark brown and reddish: quills buff, with a few dark bands. Tail sprinkled with bright brown and dusky, and with five or six deep brown bars; its underside light buff, with two or more obsolete brown bars. Leg-feathers buff, unspotted. Bill and claws bluish black.

Length, 13·0 – 17·0.

This species is found in all the States, and its geographical range appears to be very great. It occurs on both continents. In America, Pennant states that it has been found in the Falkland islands, and Richardson saw it as far north as latitude 67°. Its longitudinal range is equally great, for it extends across this continent. It breeds in the Middle States. They are often seen on the ground, and on low bushes. It is said to be bold and fierce. It lives almost exclusively on field mice and hard-winged insects, and is consequently beneficial to the farmer.

GENUS ULULA. Cuvier.

Bill short, robust, very deep; the lower mandible with a notch on each side. Ear-openings very large, with an anterior semicircular operculum in its whole length. Tarsi and feet with soft downy feathers. Facial disks complete. Wings very broad and rounded. Third quill longest; filaments of the first half of the second, and terminal part of the third, free and recurved. Tail moderate, arched, slightly rounded.

THE BARRED OWL.

ULULA NEBULOSA.

PLATE X. FIG. 21.

(STATE COLLECTION.)

Strix nebulosa. L. 12 ed.
Barred Owl. Penn. Arct. Zool. Vol. 2, p. 234, pl. 11, fig. 120. Wilson, Am. Orn. Vol. 4, p. 61, pl. 33, fig. 2.
S. nebulosa. Audub. folio, pl. 46 (male). Orn. Biog. Vol. 1, p. 242; Vol. 5, p. 386. Nuttall, Manual Orn. Vol. 1, p. 133. Richardson, F. B. A. Vol. 2, p. 81.
Syrnium nebulosum. Aud. B. of A. Vol. 1, p. 132, pl. 36 (male).
Syrnium nebulosa. Giraud, Birds of Long island, p. 24.

Characteristics. Light reddish brown above, spotted with white. Head and neck with transverse brown bars. Primaries and tail barred with light rufous. Length, 18 inches.

Description. Bill strongly curved from the base, compressed. Operculum membranaceous. In the specimen which I examined, the fifth primary longest. Legs with short feathers; the extremities of the toes covered with scales. Tail convex.

Color. Above light brown, transversely barred with whitish and yellowish. Wings barred alternately with brown and pale rufous. Facial disk obscurely marked with narrow interrupted concentric circles of light brown. Summit of the head barred with brown on a white ground. Upper part of the breast with irregular interrupted bars of brown. Belly yellowish white or buff, with numerous longitudinal dilated streaks of brown. Leg-feathers obscurely marked with pale brown bars. Irides brown. Bill light greenish yellow. Claws bluish black.

Length, 17·0 – 22·0.

The *Barred Owl* is a common species in this State. It feeds on rats, frogs, and the smaller birds and quadrupeds, and but rarely disturbs the young broods of the farmer. It is very abundant in the Southern States, and has been seen as high as the 53d degree of latitude. In Europe it is only seen in the high northern latitudes.

THE ACADIAN OWL.

ULULA ACADICA.

PLATE XII. FIG. 23.

(STATE COLLECTION.)

Strix acadica. GMELIN.
Little Owl, S. passerina. WILS. Am. Orn. Vol. 4, p. 66, pl. 34, fig. 1.
S. acadica. AUD. folio, pl. 191, m. and f. Orn. Biog. Vol. 2, p. 567; Vol. 5, 397.
Acadian Owl. NUTTALL, Man. Orn. Vol. 1, p. 137.
American Sparrow Owl. RICHARDSON, F. B. A. Vol. 2, p. 97.
Nyctale acadica. BONAP. Geog. and Comp. List. p. 6.
Little or *Acadian Owl.* AUD. B. of A. Vol. 1, p. 123, pl. 33 (male and female).
Ulula acadica. GIRAUD, Birds of Long island, p. 23.

CHARACTERISTICS. Dark brown, spotted with white; beneath whitish, blotched with rufous. Tail and wings subequal; the former with 2 – 3 narrow bars. Length, 8 inches.

DESCRIPTION. Nostrils oval, small. Ear-opening with a moderately broad operculum. Third primary longest. Tail even, scarcely rounded. No tufts. Facial disk complete. Inner and middle claw channelled; the other rounded beneath. Tarsus and toes with long hairy feathers extending to the roots of the claws.

COLOR. Light reddish brown above, with spots and blotches of white. Disk ashen grey, darker near the orbits, often rayed with dusky. Summit of the head with longitudinal streaks of white and dark brown. Bill and claws bluish black. Irides yellow. Beneath, white or greyish white, with scattered chocolate-brown blotches generally assuming a longitudinal direction. Large white spaces on the throat and neck. Primaries, when extended, exhibiting four or five bars of white. Tail also with two or more narrow bars of white.

Length, 8·0 – 10·0. Alar extent, 18·0 – 20·0.

The *Little Owl*, or *Saw-whet* as it is called in Massachusetts and this State, is found in every part of the Union. It ranges from 39° to 50° north latitude. It has a sharp note like the filing of a saw, and, according to Audubon, another like the tinkling of a bell. It breeds in swamps, in rotten trees or stumps, and in abandoned nests, laying 4 – 6 white eggs. It feeds on insects, small birds and quadrupeds. It is closely allied to the succeeding.

(*EXTRA-LIMITAL.*)

U. richardsoni. (AUDUBON, B. of A. Vol. 1, p. 122, pl. 32.) Small. Not tufted. Olive brown above, spotted with white in regular series. Tail with five bars of interrupted spots; margin white. Length, 12 inches. *Maine and Arctic regions.*

GENUS STRIX.

Upper mandible with its dorsal outline straight to the cere. Ear-openings large, semicircular; operculum larger than the aperture, and fringed with feathers. No tufts. Tarsus long, feathered, scaly beneath. Toes with tuberculated scales intermixed with bristles, and three broad scutellæ at the end. Wings long, ample; first quill with the filaments recurved. Tail moderate, nearly even.

THE AMERICAN BARN OWL.

STRIX PRATINCOLA.

PLATE XIII. FIG. 28.

White or *Barn Owl.* WILSON, Am. Orn. Vol. 6, p. 57, pl. 50, fig. 2.
Strix flammea. BONAP. Ann. Lyc. N. Y. Vol. 2, p. 38.
Barn Owl. NUTTALL, Manual Orn. Vol. 1, p. 139. AUD. folio pl. 171; Orn. Biog. Vol. 2, p. 403; Vol. 5, p. 388.
Strix pratincola. BONAP. Comp. and Geog. List, p. 6.
S. americana. AUDUBON, Synopsis, p. 25; B. of A. Vol. 1, p. 127, pl. 34 (male and female).

CHARACTERISTICS. Dark tawny above, spotted with white. Tail and wings barred with black; the latter extending beyond the tail. Beneath whitish, dotted with black. Length, 16 inches.

DESCRIPTION. Aperture of the ear very large; the feathers margining the operculum reduced to their tubes, the shafts and webs not developed. Legs long, thickly feathered, becoming like bristles on the toes. Tail nearly even, two inches shorter than the wings.

COLOR. Above tawny yellow, minutely varied with white and brown; and with oblong spots of dark brown, forming parallel series resembling bars, on the wings. Beneath, pure white or greyish, abundantly dotted with black. Tail tawny, with three or more narrow bars of blackish brown. Facial disk whitish, surrounded by a circle or ruff of rufous brown. Leg-feathers whitish, faintly pointed with dusky.

Length, 14·0 – 18·0. Alar extent, 42·0 – 46·0.

The large white or *Barn Owl*, although it appears to be common in the neighborhood of Philadelphia, is rare in this State. I have never seen but one specimen, and that was brought here about ten years since from Cuba, where it is said to winter. Richardson (Sixth Report of the British Association) states it to be found as far as 44° north latitude, so that we may expect to find it in this State. It is, however, strictly a southern species, occurring as far south as Brazil. It is nocturnal, feeding on field mice, shrew moles, etc.

This species was first suspected to be distinct from the European *flammea*, by Audubon in his *Ornithological Biography;* but he refrained from giving it a distinct name, until he was anticipated by the Prince of Canino. This is to be regretted, as the name which the former proposed, but which can not be adopted, is more appropriate and distinctive than the classical epithet given by Bonaparte.

ORDER II. PASSERES.

Bill moderate, strong, subconic. Upper mandible more or less notched at the point. Toes four (rarely three). Hind toe articulated on a level with the rest, and bearing on the ground its whole length. Tail mostly of eight feathers, rarely of ten, twelve or fourteen. Wings moderate, and with the tips pointed.

FAMILY CAPRIMULGIDÆ.

Bill much depressed, feeble; the horny part decurved, opening wide to beneath or beyond the eyes. Nostrils prominent, tubular, elliptical, emarginate. Ear-openings very large. Head wide, depressed. Feet very small. Tarsus partly feathered, scaly. Toes scutellate: hind toe versatile, small; nail of the third toe serrated on its inner margin. Wings very long and acute. Tail long, composed of ten feathers. Plumage soft. Sexes nearly similar. Partly nocturnal and partly diurnal. Allied to the preceding family.

GENUS CAPRIMULGUS. Linnæus.

Gape extending to beneath the posterior portion of the eye. On each side of the base of the bill, a series of feathers with very strong shafts, terminating in filaments with lateral fibres. Second quill longest. Tail long, rounded.

THE WHIPPOORWILL.

Caprimulgus vociferus.

PLATE XXVII. FIG. 59.

(STATE COLLECTION. Female.)

Caprimulgus vociferus. Wilson, Orn. Vol. 5, p. 71, pl. 41, figs. 1, 2, 3.
C. id., Whippoorwill. Audubon, fol. pl. 32 (male and female); Orn. Biog. Vol. 1, p. 422, and Vol. 5, p. 406. Nuttall, Manual Orn. Vol. 1, p. 614. Richardson, F. B. A. Vol. 2, p. 336. Audubon, B. of A. Vol. 1, p. 155, pl. 42 (male and female).
Antrostomus id. Bonaparte, Comp. and Geographical List, p. 8.
Whippoorwill. Giraud, Birds of Long Island, p. 31.

Characteristics. Tail much rounded, reaching one half beyond the wings. Quills with dark spots. Bristle much longer than the bill. Three outer tail feathers white at tips; in the female, these are rufous. Length 9 inches.

Description. Mouth beset with numerous bristles, the longest of which extend half an inch beyond the point of the bill. Tail much rounded; the exterior feathers nearly an inch and a half longer than the central ones.

Color. Plumage variegated and sprinkled with black, soiled white and rust-colored spots and streaks. Scapulars light yellowish, with a few oblique spots of black. Wings beautifully spotted with very light and dark brown; the quills spotted in bars with rufous. Tail with the three outer feathers (in the male) white at the extremities for half their length; but in the female, light rufous instead of white. Chin black, with small brown spots.

Length, 9·0. Spread of wings, 19·0.

The *Whippoorwill*, called "*Quok-korr-ee*" by our Dutch progenitors, appears in this State by the latter end of April, or later, according to the season. It is found occasionally as high as the 48th degree of north latitude, but its southern limits have not been ascertained. Audubon asserts that it is never heard and scarcely ever seen in Louisiana. It breeds in this State, placing its nest on or near the ground, and laying two or three bluish white eggs with numerous dark olive and bluish blotches. Every one is familiar with the plaintive notes of the bird, who, in the language of one of our poets,

> "Mourns unseen, and ceaseless sings
> Ever a note of wail and woe."

They are strictly nocturnal in their habits, and feed exclusively on winged insects.

(*EXTRA-LIMITAL.*)

C. carolinensis. (Aud. B. of A. Vol. 1, pl. 41.) Bristles shorter than the bill. Tail rounded, an inch longer than the wings: 3 outer tail-feathers white on the inner webs near the tip. Length, 12 inches. *Southern States.*

GENUS CHORDEILES. Swainson.

Bill exceedingly small. Gape opening to beneath the centre of the eyes. Upper mandible with the tip bent, and a deep lateral groove. Nostrils oblong, prominent, marginate. Eyes and ear-openings very large. No bristles at the base of the upper mandible. First quill longest. Tail emarginate.

THE NIGHT HAWK.

Chordeiles americanus.

PLATE XXVII. FIG. 60.

Long-winged Goatsucker. Pennant, Arct. Zool. Vol. 2, p. 436.
Caprimulgus americanus. Wilson, Orn. Vol. 5, p. 65, pl. 40, figs. 1, 2 (male and female).
C. popetue. Bonaparte, Obs. on Wils. Orn. No. 177. *C. virginianus,* Ann. Lyc. N. Y. Vol. 2, p. 62.
Night Hawk. Audubon, fol. pl. 147; Orn. Biog. Vol. 2, p. 273, and Vol 5, p. 406.
Night Jar. Nuttall, Ornithol. Vol. 1, p. 619.
C. (Chordeiles) virginianus. Richardson, F. B. A. Vol. 2, p. 62.
Chordeiles virginianus. Audubon, B. of Am. Vol 1, p. 159, pl. 43 (male and female). Giraud, Birds of Long Island, p. 32.

Characteristics. Varied with black and rufous; breast barred; quills with a white bar. Males with a white spot on the chin and a white bar on the tail. Length, 9 inches.

Description. Tail distinctly emarginate, shorter than the wings. Head very large, depressed. Eyes large. The claw of the middle toe pectinated as in the preceding genus.

Color. Above deep blackish brown, sprinkled with innumerable cream-colored spots and dashes of different shades. Beneath light rufous, with waving bars of deep brown. A broad white bar extending across four and a part of five of the quills. *Male,* with a horseshoe-shaped spot of white on the throat, and a band of white across the tail. In the female, these are wanting.

Length, 9·0 – 10·0. Alar extent, 23·0 – 24·0.

This species, under the name of *virginianus,* was a confused mixture of the Night Hawk and Whippoorwill by Gmelin and Brisson. It was not well defined until examined by Vieillot and Wilson. Bonaparte, in the work above cited, observes that the name of *popetue,* awkward and barbarous as it is, must be retained on the score of priority. In his subsequently published synopsis, he adopts the name of *virginianus;* passing over Wilson's name of a real species, on the score of its having been already employed in this genus. Since the genus has been remodelled, this objection has no weight, and we take pleasure in restoring the legitimate designation of the species.

The *Night Hawk,* in spite of its popular name, is scarcely nocturnal. It is seen in the afternoon, high in air; towards evening, and in the twilight, it skims over the ground, and is actively engaged in the search of winged insects. It appears in our State at the same time

with the Whippoorwill, or sometimes earlier. Its first appearance is known by a booming sound heard high in air, while the bird itself is unseen. When a boy at school, I remember to have heard this mysterious sound along the Connecticut river, and was told that it was the *Shad Spirit*, announcing to the scholes of shad, about to ascend the river, their impending fate. This may probably have been derived from the traditionary mythisms of the Indians.

This species is often confounded with the Whippoorwill by persons not conversant with natural history, but a slight attention to their generic differences will establish their distinctive characters. Mr. Giraud remarks, that from the shortness of the legs and feet of the Night Hawk, it is always observed, when perched, to be sitting lengthwise of the branch.

The Night Hawk has a wide range from Mexico to the Arctic islands, where, as the sun never sets during its stay, it cannot be considered as a nocturnal species.

FAMILY HIRUNDINIDÆ.

Bill very short, broad at base, compressed at the end. Upper mandible with few or no bristles at its base; its edge inflected, with a notch more or less distinct. Gape wide. Nostrils oblong, contiguous, basal. Feet very short. Toes very short; the three anterior subequal; the hind toe very small, more or less versatile. Claws strong, compressed, curved, acute. Wings extremely long, falciform. Tail various, of ten or twelve feathers. Plumage compact.

GENUS CHÆTURA. Stephens.

Tail-feathers ten, stout; the shafts elongated into points projecting beyond the webs. Edge of upper mandible with an indistinct sinus. Tarsus bare, not scutellate, longer than the middle toe, which scarcely exceeds the outer. Second quill longest. Flight irregular.

THE CHIMNEY SWALLOW.

Chætura pelasgia.

PLATE XXVII. FIG. 58.

(STATE COLLECTION. Male and Female.)

Hirundo pelasgia, Linn. *Chimney Swallow*, Wilson, Orn. Am. Vol. 5, p. 48, pl. 39, fig. 1.
Cypselus pelasgius. Bonaparte, Obs. No. 175; Ann. Lyc. N. Y. Vol. 2, p. 63.
Chimney Swift or *Swallow*. Nuttall, Man. Orn. Vol. 1, p. 609. Audubon, fol. pl. 158; Orn. Biog. Vol. 2, p. 329, and Vol. 5, p. 419.
Chimney Swallow, or *American Swift*. Id. B. of A. Vol. 1, p. 164, pl. 44 (male and female).
American Swift, *C. pelasgia*. Giraud, Birds of Long Island, p. 33.

Characteristics. Deep sooty brown. Chin, and line over the eye, dull whitish. Wings extending an inch and a half beyond the tail, which is even. Length, 4 – 5 inches.

Description. Nostrils partially covered behind by a membrane, leaving a small tubular aperture. Tongue short, cartilaginous, bifid. Feet muscular; claws exceedingly sharp. The shafts of the tail-feathers elongated into sharp, strong and very elastic points.

Color. Brownish black above; somewhat lighter on the rump. Throat greyish white. Eyes black, surrounded by a bare black skin: a light colored line over the eye.

Length, 4·0 – 5·0.

The *Chimney Swallow* appears in New-York about the latter end of April, from the tropical regions. Its name is derived, as every one knows, from its selecting a chimney in which it builds its nest. In the unsettled districts, it breeds in hollow trees and caverns. Audubon relates that he counted nine thousand of these swallows roosting in the hollow trunk of a Plane tree (*Platanus occidentalis*). This occurred in Kentucky. In this State, they build exclusively in chimneys, forming their nests of dead twigs, which they break off with their feet, and agglutinate together. The eggs are four in number, white unspotted; and two broods are frequently raised in a season. It feeds on insects, which it captures on the wing; and, like some of the preceding families, it disgorges the indigestible portions of its food. It ranges as far north as the 50th parallel, and westward to the Pacific ocean. Peculiar to America.

(*EXTRA-LIMITAL.*)

C. vauxi. (Townsend, Ac. Sc. Vol. 8, p. 148.) Rump and tail dull cinereous brown; throat and upper part of breast greyish white; beneath ash grey. Length, 3½ inches. *Columbia River.*

GENUS HIRUNDO. Linnæus.

Bill with a few scattering bristles at the base. Edge of upper mandible with a distinct notch. Tarsus scutellate in front; the toes scutellate. Middle toe slightly longest: hind toe not versatile. First quill longest. Tail of twelve feathers, emarginate or forked.

THE PURPLE MARTIN.

Hirundo purpurea.

PLATE XXVIII. FIG. 61.

(STATE COLLECTION. Female.)

Hirundo purpurea, Linn., Gmelin.
Purple Martin. Wilson, Am. Orn. Vol. 5, p. 38, pl. 39, figs. 1 and 2.
H. purpurea. Bonaparte, Ann. Lyc. Vol. 2, p. 64.
Purple Martin. Nuttall, Man. Orn. Vol. 1, p. 598. Audubon, fol. pl. 22; Orn. Biog. Vol. 1, p. 115, and Vol. 5, p. 408. Id. B. of A. Vol. 1, p. 170, pl. 45 (male and female).
Progne purpurea. Bonaparte, Comp. and Geog. List, p. 8.
H. purpurea, Purple Martin. Giraud, Birds of Long Island, p. 34.

Characteristics. Dark bluish purple and glossy. Wings and forked tail brownish black. *Female* and *young*, bluish brown; belly pale. Length, $7\frac{1}{2}$ inches.

Description. Bill rather robust. Wings rather longer than the tail, which is forked. Plumage compact, glossy.

Color. Quills, greater coverts and tail black. General color purplish black, with blue metallic reflections. Lores velvet black. Legs of a dark soiled purple. *Female*, paler above and lighter beneath, where we observe longitudinal ochreous streaks, intermixed frequently with darker spots or streaks.

Length, 7·0 – 8·0.

This is the largest American species of the family. It reaches this State from the south about the middle of April. They are bold and active, attacking and pursuing all the larger birds who venture to approach their nests. They are consequently general favorites, and boxes are usually prepared for them against dwelling houses, of which they take possession, driving off any previous occupant. It commences building its nest almost immediately after its arrival, laying from four to six pure white eggs, and often raising two broods in a season. It feeds upon various winged insects, such as wasps, bees and large beetles. It leaves us, on its southern migration, about the middle of August. Its geographical range is very great. It has been observed by Mr. Swainson as far south as Pernambuco, in 9° south latitude. I have seen it there, and also at Bahia in about 12° south, but neither saw nor heard of it farther south. To the north, it penetrates the arctic circle. Peculiar to America.

Boié has recently formed the genus Progne from this bird, but I am not informed what characters he has assigned to it.

THE WHITE-BELLIED SWALLOW.

HIRUNDO BICOLOR.

PLATE XXIX. FIG. 63.

(STATE COLLECTION. MALE AND FEMALE.)

Hirundo bicolor. VIEILLOT, pl. 31.
H. virides. WILSON, Am. Orn. Vol. 5, p. 44, pl. 38, fig. 3.
H. bicolor. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 65.
White-bellied Swallow. NUTTALL, Man. Orn. Vol. 1, p. 605.
H. bicolor. RICHARDSON, F. B. A. Vol. 2, p. 328. AUDUBON, folio, pl. 93; Orn. Biog. Vol. 1, p. 491, and Vol. 5, p. 447. ID. Birds of Am. Vol. 1, p. 175, pl. 46 (male and female).
Chelidon id. BONAPARTE, Comp. and Geogr. List, p. 8. BOIE.
H. bicolor, White-bellied Swallow. GIRAUD, Birds of Long island, p. 36.

CHARACTERISTICS. Dark lustrous greenish blue above; beneath white. Tail forked. Tarsus naked. Length, 5 to 5·5 inches.

DESCRIPTION. The closed wings extend somewhat beyond the tail. First quill longest, and the lesser ones deeply emarginate. Bill and claws robust.

COLOR. Above lustrous steel blue; beneath white. Bill black. Feet flesh-colored. *Female*, with less of the lustrous color, but in other respects similar.

Length, 5·0 – 5·5.

This swallow is very numerous on the low marshes on the southern shores of Long island. They are slaughtered by thousands and sent to market, and are much esteemed by gourmands as some small species of snipe. It feeds partly on insects and partly on berries, particularly the fruit of the *Myrica cerifera*, or *Wax-berry*, on which it becomes exceedingly fat. It builds in hollow trees, and also occupies boxes in the neighborhood of dwellings. Eggs from 4 to 6, pure white. It ranges from the Gulf of Mexico to the 60th parallel of north latitude. A few, according to Audubon, winter in the neighborhood of New-Orleans. It appears in this State about the middle of April, and leaves us on its southern migration in the early part of September. Boié has made it the type of his genus CHELIDON. It is peculiar to America.

THE BANK SWALLOW.

Hirundo riparia.

PLATE XXVIII. FIG. 62.

(STATE COLLECTION. Male and female.)

The Sand Swallow. Pennant, Arct. Zool. Vol. 2, p. 430.
Hirundo riparia, Bank Swallow. Wilson, Am. Orn. Vol. 5, p. 46, pl. 38, fig. 4. Bonaparte, Ann. Lyc. N. York, Vol. 2, p. 65.
H. id., Bank Swallow or *Sand Martin.* Nuttall, Man. Ornith. Vol. 1, p. 607.
H. id Audubon, folio, pl. 385; Ornith. Biog. Vol. 4, p. 584.
Sand Martin. Richardson, F. B. A. Vol. 2, p. 333. *Cotyle,* Boie.
Bank Swallow. Audubon, B. of A. Vol. 1, p. 187, pl. 50 (male, female and young).
H. riparia, Bank Swallow. Giraud, Birds of Long island, p. 37.

Characteristics. Greyish brown above, and forming a band across the breast; beneath light colored. Tarsus naked, with a few tufts of downy hair behind. Tail slightly forked. Length 5 inches.

Description. The whole upper parts dark greyish brown, the upper surfaces of the wings and tail being darker than the body: there is a broad band of the same color across the breast. Exterior feather of the tail slightly edged with whitish. Lores and bill black. Claws delicate, pointed and black. A slight streak of whitish occasionally over the eye. Lower side of the shafts of the primaries white. *Young*, with the feathers slightly bordered with rufous, more particularly on the wing-coverts.

Length, 5·0. Alar extent, 10·5.

This is one of our earliest swallows, arriving from the south in the vicinity of New-York. They dig horizontal holes in high sandy bluffs, at the extremity of which they form their nest of grass and feathers, and lay about five white eggs. They live on the smaller hymenopterous insects, which they take on the wing. Their geographical range is very great. Their southern limits are not yet established, but they occur in Louisiana, and have been observed at the mouth of Mackenzie's river in the 68th degree of north latitude. This species is common to Europe and America, and is found indeed in almost every quarter of the globe.

THE BARN SWALLOW.

Hirundo rufa.

PLATE XXIX. FIG. 64.

(STATE COLLECTION. Male and female.)

Hirundo rufa. Gmelin.
Chimney Swallow. Pennant, Arct. Zoology, Vol. 2, p. 429.
H. americana. Wilson, Am. Ornith. Vol. 5, p. 34, pl. 38, figs. 1 and 2.
H rufa. Bonaparte, Ann. Lyc. N. Y. Vol. 2. p. 64. Nuttall, Man. Orn. Vol. 1, p. 601, figure.
H. rustica. Audubon, fol. pl. 173; Orn. Biog. Vol. 2, p. 413, and Vol. 4, p. 411.
H. americana. Richardson, F. B. A. Vol. 2, p. 329.
H. rustica. Audubon, B. of A. Vol. 1, p. 181, pl. 48 (male and female).
H. rustica, Barn Swallow. Giraud, Birds of Long Island, p. 35.

Characteristics. Steel-blue above; beneath chesnut. Tail deeply forked; the lateral feathers narrow, and longer than the wings. Length, 7 inches.

Description. General color above glossy blue. Forehead and beneath bright chesnut: a band on the neck, glossy blue. Bill black. Irides dark brown. Legs dark purple. Tail deeply forked: all the feathers, but the central pair, have a large white spot on the middle of their inner webs. *Female* and *young*, paler beneath, and the exterior tail-feathers shorter.

Length, 6·5 – 7·0.

The *Barn Swallow* is one of our most common visiters. It makes its nest of pellets of mud mixed with grass, and attached to the rafters or eaves of outhouses. It deposits from 4 to 6 white eggs, sparsely spotted with reddish brown. It destroys numerous noxious winged insects. It has been observed in Mexico. It usually appears in Louisiana the latter end of February, and in this State the latter end of March or beginning of April. This year, it did not appear here until the 18th of April. It leaves this State about the end of August. It has been observed as far north as 67° 50′. Peculiar to America, but confounded by many with the *H. rustica* of Europe.

THE CLIFF SWALLOW.

Hirundo fulva.

PLATE XXX. FIG. 67.

(CABINET LYCEUM.)

Hirundo fulva. Vieillot, Vol. 1, p. 62, pl. 32.
H lunifrons. Say, Long's Expedition, Vol. 2, p. 47.
H fulva. Clinton, Ann Lyc. N. Y. Vol 1, p. 156. Bonaparte, Am. Ornith. Vol. 1, p. 63, pl. 7, fig. 1.
Republican or *Cliff Swallow.* Audubon, fol. pl. 68; Ornith. Biog Vol. 1, p. 353, and Vol. 5, p. 415.
Fulvous or *Cliff Swallow.* Nuttall, Orn. Manual, Vol. 1, p. 603.
H. lunifrons. Richardson, F. B A. Vol. 2, p. 331.
H. fulva. Audubon, B. of A. Vol. 1, p. 177, pl. 47. Giraud, Birds of Long Island, p. 38.

Characteristics. Blue-black above; beneath brownish white. Throat and rump rust-colored. Front with a pale semilunar band. Tail even. Length, 5½ inches.

Description. Bill rather short. Tail very slightly emarginate, not longer than the wings.

Color. Bill and feet dusky. Irides dark brown. A narrow black line extends over the bill to each eye. Front white or reddish white, and the remaining part of the crown black, violaceous. Chin, throat and cheeks dark chesnut extending in a narrow band on the hind part of the neck. Rump and some of the tail-coverts pale reddish. Breast reddish ash. Inferior wing-coverts ashy brown. The exterior tail-feathers slightly edged with whitish on the inner vane.

Length, 5·0 – 5·5. Alar extent, 12·0 – 13·0.

The history of this species is curious. It was first noticed* by Vieillot at St. Domingo and Porto Rico, in large flocks, in the middle of May. He published a description of this species, with an indifferent figure. Nothing further was known about it, until Say observed it in 1820 in great numbers in the Rocky mountains. Unacquainted with Vieillot's description, he called it *Hirundo lunifrons.* In the interim, a solitary pair appeared near Whitehall at the south end of Lake Champlain, and every succeeding year appeared in greater numbers, and extended farther west and south through this State. The celebrated Dewitt Clinton, in 1824, sent a description of this bird to the Lyceum of Natural History of New-York, naming it *H. opifex*, which he was induced to change upon reading Vieillot's description. In 1820, it was observed by Capt. Franklin in latitude 65° north. Swainson, in the seventh volume of Griffith's Cuvier, has also given it as new, under the name of *melanogaster.* It has appeared on the coast of this State within the last two years, and Mr. Bell has observed its nest in Rockland county.

* I have a note that it was seen in great numbers at Dennisville, Maine, in 1795, but the authority is not remembered; and it is scarcely probable that so distinct a species, with such remarkable habits, should not have attracted the attention of naturalists.

The winter retreat of the Cliff Swallow is in Mexico, and perhaps farther south. Its ordinary course of migration appears to have been along the Rocky mountains, and across high northern latitudes to the Atlantic; and from thence, for the last forty years, it has gradually descended each successive year more to the south. In the course of years, it may become a very common and generally distributed species throughout the Union. Unlike its congeners, it has not yet followed the Atlantic coast in its northern migrations, but takes the course of the vallies of the Mississippi and Ohio. Its return south is doubtless more direct; but as this must be very rapid, it has not yet been observed. In this State, its stay scarcely exceeds six weeks; appearing in the first week of June, and leaving the latter end of July. It breeds with us, and its nest, composed of mud or clay with a narrow tubular neck, resembles a coarse retort. The eggs 4 – 5, white spotted with brown. Until it approached the habitations of man, these nests were agglutinated to the sides of overhanging rocks; but now they attach them boldly under the eaves of houses and out-buildings. Peculiar to America.

(*EXTRA-LIMITAL.*)

H. thalassina. (Audubon, B. of A. Vol. 1, p. 186, pl. 49.) Above violet green; a line over the eyes, cheeks and all beneath white. Tail emarginate, much shorter than the wings. *Female:* Head and rump brown. Length, 4½ inches. *Rocky Mountains and Texas.*

H. serripennis. (Id. pl. 51.) Greyish brown above; lighter beneath. Tail nearly even. Outer margin of first quill with the filaments curved into hooks. Closely allied to *riparia.* Length, 5¼ inches. *Southern States.*

FAMILY AMPELIDÆ.

Bill short, triangular, decurved at the tip; the edges more or less distinctly notched. Roof of the upper mandible concave, with three longitudinal ridges. Tongue horny, deeply slit. Nostrils oval, partly concealed by bristly reversed feathers. Feet short, robust; claws long, curved, acute. Wings broad. Plumage silky.

GENUS BOMBYCILLA. Brisson.

Upper mandible with a distinct tooth. Three toes directed forward and one backward. Tarsus with six scutellæ. Wings with the spurious feathers very short; the first and second quills longest. Head crested. Adults with the tips of some or all of the secondaries, and occasionally of the tail, terminated by small bright red appendages like sealingwax.

Obs. This genus, as now restricted, comprises one species peculiar to this country, and the other common to Europe and America. This latter has been only recently observed with us, and is now increasing in numbers.

THE BLACK-THROATED WAXWING.

BOMBYCILLA GARRULA.

PLATE XXVI. FIG. 57 (FEMALE).

(CABINET OF THE LYCEUM.)

Ampelis garrulus. LINNÆUS, Syst.
Bombycilla garrula. BONAPARTE, Am. Orn. Vol. 3, p. 7, pl. 16, fig. 2; Ann. Lyc. N. Y. Vol. 2, p. 438. RICHARDSON, F. B. A. Vol. 2, p 237. NUTTALL, Vol. 1, p. 246. AUDUBON, B. of A. Vol. 4, p. 165, pl. 49.
Black-throated Waxwing. GIRAUD, Birds of Long Island, p. 165.

CHARACTERISTICS. Drab. Throat, frontlet and line over the eye black. Belly ashen; vent rufous. Wings and tail blackish: the latter tipped with yellow; the former with two series of white marks. Length, 8 – 9 inches.

DESCRIPTION. The feathers of the crown form a crest nearly an inch broad and an inch and a half in length. Secondaries with four to seven of the shafts terminating in bright red waxen appendages, occasionally wanting. Adult males with the ends of the shafts of the tail-feathers slightly enlarged at the end, and bright red. Tail three inches long.

COLOR. Brownish grey. A narrow line over the base of the upper mandible, extending to the eyes and beyond them, and the upper part of the throat, deep black: a narrow streak below the lower mandible, white. Wing-feathers blackish. Coverts largely tipped with white, forming a band. Secondaries marked in a similar manner, but forming a larger band. Quills with a bright yellow spot at the end of the outer web. Tail broadly tipped with yellow. Irides dark red.

Length, 8·0 – 9·5.

This species inhabits the northern regions of Europe and Asia. The first published account of it as an inhabitant of North America, is due to Charles Bonaparte, Prince of Canino, who introduced it in his Synopsis of the Birds of North America, in the *Annals of the Lyceum* referred to above. It was first observed in high northern latitudes, but has since been noticed as far south as Philadelphia. The specimen from which our figure was taken, was shot in the autumn of 1835, in the neighborhood of this city. It is still a rare species, but is apparently on the increase.

THE CEDAR-BIRD.

BOMBYCILLA CAROLINENSIS.

PLATE XXVI. FIG. 56.

(STATE COLLECTION. MALE, FEMALE AND YOUNG).

Ampelis americana. WILSON, Am. Orn. Vol. 1, p. 107, pl. 7, fig. 1.
Bombycilla carolinensis. BONAPARTE, Obs. No. 78; Ann Lyc. Vol. 2, p. 59. AUDUBON, fol. pl. 43; Orn. Biog. Vol. 1, p. 227. NUTTALL, Man. Orn. Vol. 1, p. 248, figure.
B. americana. RICHARDSON, F. B. A. Vol. 2, p. 239.
B. carolinensis. AUDUBON, B. of A. Vol. 4, p.
Cedar Waxwing, B. carolinensis. GIRAUD, Birds of Long island, p. 163.

CHARACTERISTICS. Brownish grey: crest slightly rufous; frontlet, line over the eye, and chin black. Belly yellow; vent white. Wings blackish, unspotted. Length, 7 or 8 inches.

DESCRIPTION. A deep black line from the nostril, over the eye, to the hind head, bordered above by a slender line of white. Chin black, gradually blending into greyish brown. Six or seven, and sometimes all the secondaries furnished with a prolongation of their shafts, of a vermilion color, and resembling sealingwax. Occasionally these appendages are seen on the tail-feathers, and sometimes individuals are found without them. Bill, legs and claws black. *Female*, with its plumage duller, smaller crest, and narrower bar on the tail.

Length, 7·0 – 8·0.

This well known bird has various popular names. Those of *Cedar-bird*, and *Cherry-bird*, are most common in this State. In Massachusetts, it is called *Canada Robin;* and by the French Canadians, it is known under the name of *Récollet*, from the color of its crest resembling the hood of that religious order. It is frequently called the *Brown-bird.*

The *Cedar-bird* appears in flocks, and lives chiefly upon whortleberries (*Vaccinium frondosum*), cedar-berries (*Juniperus virginiana*, improperly called *cedar* in the Northern States), persimmons (*Diospyros virginiana*), grapes and cherries. They are best known by their fondness for cherries, which they devour with great avidity, and in large quantities. They are not, however, exclusively frugivorous, but repay the comparatively unimportant injuries which they inflict on man, by ridding trees of the small beetles, caterpillars and cankerworms with which they are infested. The eggs are usually four in number, white, tinged with purple and spotted with black.

The Cedar-bird is capable of braving a low temperature, and is frequently seen with us during the whole winter. They range from the equator to the 50th degree of north latitude.

FAMILY ALCEDINIDÆ.

Bill long, straight, compressed, angulated, robust. Mandibles opening to beneath the eyes. Neck short. Tarsus very short, scutellate in front. Anterior toes united for more than half their length; hind toe small. Solitary, feeding on insects or fishes. Breed in holes near the banks of streams.

GENUS ALCEDO. Linnæus.

Bill robust, tetragonal, pointed; the ridge above distinct, somewhat flattened; the edges nearly straight, without notch: upper mandible slightly longest. Nostrils basal, adjacent, oblong, oblique, half closed by a naked membrane. Tarsus half the length of the middle toe; claw of the middle toe dilated in front. Third quill longest; second subequal. Tail of twelve feathers.

THE BELTED KINGFISHER.

Alcedo alcyon.

PLATE XIX. FIG. 40 (Male). FIG. 41 (Young).

(STATE COLLECTION. Male and young).

Alcedo alcyon. Linnæus, 12 ed. p. 180.
Belted Kingfisher. Pennant, Arct. Zool. Vol. 2, p. 279.
A. alcyon. Wilson, Am. Orn. Vol 3, p. 59, pl. 23. fig 1. Audubon, folio, pl. 97 (m. and f.); Orn. Biog. Vol. 1. p. 394. Nuttall, Man. Ornith. Vol. 1, p. 594, figure. Richardson, F. B. A. Vol. 2, p. 339.
A. id., Belted Kingfisher. Giraud, Birds of Long island, p. 172.

Characteristics. Bluish above, with a belt of the same color across the breast; beneath white. Head crested: a white spot on each side of the eye. *Female* and *young*, with two rust-colored belts across the breast. Length, 12 inches.

Description. Bill with a longitudinal furrow on each side of the ridge of the upper mandible. Tail short, nearly even, slightly rounded, reaching beyond the tips of the closed wings.

Color. Bluish slate above. Breast bluish white. A white spot, varying in size and shape, above and beneath the eye. Quills black, barred with white at the base. Secondaries spotted and tipped with white, forming narrow bars on the expanded wings. Central pair of tail-feathers bluish above, obsoletely spotted with white near the shafts; the remainder black, with interrupted white bars bordered with blue. A light blue broad belt over the breast. *Female* and *young*, with a double belt; the upper rusty tinged with blue; the lower narrower, rust-colored, and expanded over the flanks.

Length, 12·0 – 12·5.

The *Kingfisher* breeds in this State, where he is a resident during nearly the whole year. I have seen him on the south side of Long island in the month of December, and as early as the beginning of March. Their nests are excavated in dry sandy banks, to the depth of five or six feet, enlarged at the end: they lay 4 – 6 white unspotted eggs. Their food consists mainly of small fish, which they swallow whole, casting up the scales, bones and indigestible parts in the form of pellets. It ranges from Mexico to the 68th parallel of north latitude, and is peculiar to this continent. It has been arranged by Boié under the genus CERYLE, with the characters of which I am not acquainted.

FAMILY TROCHILIDÆ.

Bill elongate, awl-shaped, slender, straight or slightly arched, flexible, pointed at tip. Nostrils linear, with a membranous flap above. Feet short. Tarsus very short, annulated, naked or half feathered. Tail of ten or twelve feathers. The inner toe united at the base to the middle one; hind toe articulated high on the tarsus. Tongue long, extensile, ending in two filaments. The first or second primaries longest. Plumage often brilliant. Diminutive in size.

OBS. This family is at present separated into three genera. Although more than one hundred species are described from America, yet we have in this State but one species, and that belongs to the

GENUS TROCHILUS. LINNÆUS.

Bill long, slender, depressed at the base, cylindrical. Ridge of the upper mandible narrow at the base, convex beyond, and covering the lower mandible, which has a very acute ridge. Head small. Middle toe scarcely longer than the rest. Wings very long and narrow; first quill longest. Tail nearly even, of ten feathers.

THE RED-THROATED HUMMING-BIRD.

TROCHILUS COLUBRIS.

PLATE XL. FIG 87 (MALE AND FEMALE).

(STATE COLLECTION.)

Trochilus colubris, LINN. 12 ed. p. 191. *Red-throated Honeysucker*, PENN. Arct. Zool. Vol. 2, p. 286.
Humming-bird. WILSON, Am. Orn. Vol. 2, p. 26, pl. 10, figs. 3 and 4.
T. colubris. AUDUBON, folio, pl. 47; Orn. Biog. Vol. 1, p. 248, and Vol. 5, p. 544. NUTTALL, Manual Ornithol. Vol. 1, p. 588, figure. RICHARDSON, F. B. A. Vol. 2, p. 323.
Ruby-throated Humming-bird. AUDUBON, B. of A. Vol. 4, p. 190.
T. colubris. GIRAUD, Birds of Long island, p. 169.

CHARACTERISTICS. Golden green; throat ruby-colored. Tail notched, black; its three outer feathers rusty white at the tips. *Female:* throat white. Length, 3½ inches.

Description. Bill straight, somewhat dilated near the tip. First primary longest, reaching nearly to the tail, which is deeply emarginate (Audubon describes it as even).

Color. Above light green, with metallic reflections. Primaries and lateral tail-feathers dusky black. Beneath greyish white mixed with green. Throat and breast in the male resplendent ruby or flame-colored, varying into dusky orange, according to the light in which it is held. *Female*, without the brilliant throat mark, greyish beneath; the lateral tail-feathers broadly banded with black, tipped with white. *Young*, dull whitish beneath; the tail tipped with white.

Length, 3·2 – 3·5.

This is the smallest species of bird occurring in this State, and, in particularly warm seasons, it is found here in great numbers. It reaches the southern parts of the State about the commencement of May, and almost immediately begins to construct its nest, which is usually placed on the upper side of a limb, and coated with moss or lichens, in order to make it resemble the tree to which it is attached. It lays two white unspotted eggs. It feeds on the sweet juices of flowers, and, according to the observations of Wilson, undoubtedly destroys small insects. It is active and fearless, entering out-houses and dwellings. In one instance a humming-bird flew into my hall, and was captured. It appeared as if dead, and while the children were busily engaged in examining it, it suddenly darted away, apparently uninjured. The Humming-bird ranges from Mexico to 57° north, where it even breeds. It leaves us for the south about the beginning October, and sometimes even earlier. In common with the whole family, it is peculiar to America.

(*EXTRA-LIMITAL.*)

T. rufus. (Audubon, fol. pl. 379.) Head rich green and gold; back rust-color. Primaries deep blue. Feathers on the neck elongated into a ruff. *California.*

T. mango. (Id. fol. pl. 184.) Neck and breast velvet-black, margined with emerald-green. *Female*, same parts white, with a longitudinal streak of black. *Florida Keys.*

T. *anna.* (Id. Birds of America, Vol. 4, pl. 252, p. 188.) Head, cheeks and throat blood-red changing to red; above glossy green. *Rocky Mountains.*

FAMILY CERTHIDÆ.

Bill generally elongate, slender, awl-shaped, acute, compressed. Nostrils basal, obvious, half closed by a membrane. Tarsus naked, with seven or eight scutellæ. Toes long and slender. Wings moderate or short, broad and rounded. Tail short, broad, of twelve feathers.

Obs. Under this family, Charles Bonaparte has included the *Nuthatches*, *Creepers*, and *Wrens*, comprising seven European and fourteen American species.

GENUS SITTA. Linnæus.

Bill moderate, very hard, conic, subulate, slightly compressed, with short bristles at the base. Mandibles equal; the lower slightly curved from the middle. Nostrils basal, round, partly covered by reversed bristly incumbent feathers. Tongue short, slender, wide at base; its tip terminating in strong bristles. Tarsus short, with eight scutellæ. Toes long, much compressed; hind toe long, with a stout compressed and hooked nail. Second, third and fourth quills longest. Dwell in woods. Feed on insects, and occasionally on nuts and seeds.

THE WHITE-BREASTED NUTHATCH.

Sitta carolinensis.

PLATE XLI. FIG. 91.

(STATE COLLECTION. Male and female.)

Sitta carolinensis, Brisson. *White-breasted Black-capped Nuthatch*, Wilson, Am. Orn. Vol. 1, p. 40, pl. 2, fig. 3.
White-breasted American Nuthatch. Nuttall, Man. Orn. Vol. 1, p. 581.
White-breasted Nuthatch. Audubon, fol. pl. 152; Orn. Biog. Vol. 2, p. 299, and Vol. 5, p. 373; B. of A. Vol. 4, p. 175, pl. 247. Giraud, Birds of Long island, p. 166.

Characteristics. Slate-blue above. Head and neck above black; beneath pure white. Bill long. *Young:* Head plumbeous. Length five inches.

Description. Bill straight, longer than the head, with incumbent feathers at the base of the upper mandible, extending beyond the nostrils. The first and fifth quills subequal. Tail nearly even, slightly rounded.

Color. Summit of the head and back of the neck glossy black, dilating over the shoulders. Back bluish. Quills black, edged with bluish. Inside of the wings, near the shoulders,

black, bordered behind with white. Outer tail-feathers black, tipped and barred with white. Sides of the head and beneath pure white. *Female:* Crown dark leaden; neck glossy black. *Young*, without black on the head. Length, 5·0 – 5·5.

This industrious little bird derives its popular name from the *hatches* or hammerings which he makes on hard nuts, in search of larvæ within. It is a resident in this State, as I have seen it during the whole winter. It lays from four to six whitish eggs, spotted with brown at the larger end. Its food consists mainly of spiders, ants, etc. Its geographical range is from Mexico to Maine.

THE RED-BELLIED NUTHATCH.

SITTA CANADENSIS.

PLATE XL. FIG. 88.

(STATE COLLECTION. MALE AND FEMALE.)

Sitta canadensis. LINNÆUS, Syst. Nat. 12 ed. p. 177 (young).
Sitta varia. WILSON, Am. Orn. Vol. 1, p. 43, pl. 2, fig. 4.
S. canadensis. BONAPARTE, Obs. No. 60, and App.; Ann. Lyc. N. Y. Vol. 2, p. 96. AUDUBON, fol. pl. 105; Orn. Biog. Vol. 2, p. 24, and Vol. 5, p. 474.
Red-bellied Nuthatch. NUTTALL, Man. Orn. Vol. 1, p. 583. AUDUBON, Birds of Am. Vol. 4, p. 179, pl. 248.
Sitta canadensis. GIRAUD, Birds of Long island, p. 168.

CHARACTERISTICS. Smaller than the preceding, lead-colored. Head, neck and eye-stripe black; rust-colored beneath. Bill short. Length, four inches.

DESCRIPTION. Bill straight, short, entire. The first quill shorter than the fifth. Wings reaching nearly to the tip of the tail, which is slightly rounded.

COLOR. Frontlet, cheeks, shoulder and line over the eye white: a line of black passes through the eye to the shoulder. Legs, feet and claws dull greenish yellow. Chin white. Beneath light rust-color or reddish. Lateral tail-feathers barred with white near the end, and tipped with pale brown. *Female:* Crown brownish black; beneath light reddish.

Length, 4·0 – 4·5.

This hardy little northern bird appears in this State in the autumn and spring, as it passes to and fro on its migrations. It feeds on insects and the oily seeds of the evergreens, and ranges from 38° to 52° north. Its history is as yet very imperfect, but from its resemblance in appearance and general habits to the preceding, it may be presumed to be similar to that species.

(*EXTRA-LIMITAL*)

S. pusilla. (Wils. Vol. 2, pl. 15. Aud. B. of A. Vol. 4, pl. 249.) Plumbeous. Head and neck above light brown; beneath slate. Lateral tail-feathers black, tipped with grey and crossed with white. Length, 4 inches. *Southern States.*

S. pygmæa, Vigors. (Aud. B. of A. Vol. 4, p. 184, pl. 250.) Greyish brown above. Quills and tail dusky margined with grey. Two outer feathers of tail with a white band towards the base. Length, 3½ inches. *California.*

GENUS CERTHIA. Linnæus.

Bill long, slender, arched, entire, much compressed, three-sided, acute. Nostrils basal, linear, oblong, situated in a groove, and half closed by a membrane. Edges of mandibles not notched. Tarsus and middle toe subequal, compressed: first toe longer than the middle toe, including the claw; hind toe longest, with a very long claw. Wings short, very broad; fourth and fifth quills longest; first shorter than the seventh. Tail wedge-shaped, of twelve stiff pointed feathers.

THE BROWN CREEPER.

Certhia americana.

PLATE XLI. FIG. 90 (Female).

(STATE COLLECTION.)

Brown Creeper. Wilson, Am. Orn. Vol. 1, p. 122, pl. 8, fig. 1. Nuttall, Man. Orn. Vol. 1, p. 585. Audubon, fol. pl. 415; Orn. Biog. Vol. 5, p. 458.
C. americana. Bonaparte, Geog. and Comp List, p. 11.
C. familiaris. Audubon, B. of A. Vol. 2, p. 109, pl. 115. Giraud, Birds of Long island, p. 71.

Characteristics. Dark grey, varied with light brown and dusky; beneath white; rump and tail dusky brown. Length, 5½ inches.

Description. The first and seventh primaries subequal. Tail rounded, longer than the body; the quills with their shafts projecting beyond the webs, and ending in acute elastic points. Plumage on the back soft and loose.

Color. Above reddish brown. Feathers with a dull white central streak. A white streak over the eye, and a small dark triangular spot between the eye and base of the bill. Beneath white, tinged with brown on the sides. Wings deep brown. Tail brown, with obsolete dusky undulations.

Length, 5·0–5·5.

The *Brown Creeper* is supposed not to be a common species in this State, although it breeds and remains here the whole year. It may not, however, have been often observed, as it is a very solitary bird, inhabiting for the most part the recesses of the forests. The eggs are from 7 – 9, of a dull ash-color with dots and streaks of brown. It feeds on insects and the seeds of pines. Wilson could detect no differences between this and the Common Creeper (*C. familiaris*) of Europe. In this he has been followed by all ornithologists until recently, when Charles Bonaparte, whose knowledge of both European and American birds is confessedly unrivalled, has considered them as specifically distinct. It ranges from Louisiana to the 50th degree of north latitude.

(*EXTRA-LIMITAL.*)

C. albifrons. (Giraud, Birds of Texas, plate.) Dark brown, spotted with lighter. Tail and coverts light brown, broadly barred with black: throat, foreneck and breast pure white. Length, 5·4. *Texas.*

GENUS MNIOTILTA. Vieillot.

Bill straight, slender, much compressed towards the end: notches on the edges obsolete. Tongue long, pointed and horny at tip. Feet moderate, very slender. Tarsus much compressed; the upper scutella blended, shorter than the middle toe and claw. Toes compressed; the first very long. Plumage loose. Wings long: the second and third quills longest, subequal; first longer than the fourth. Tail moderate, nearly even, slightly emarginate.

Obs. This genus was instituted by Vieillot, for the reception of a species which had been arranged by Linnæus as a *Motacilla*, by Latham as a *Sylvia*, and by Wilson and Vieillot himself as a *Certhia*. It was subsequently arranged by Bonaparte as a *Sylvia*, and by Swainson and Jardine as a *Sylvicola*. Wilson, considering the actual state of ornithological knowledge in his time, was justified by its habits, and most of its characters, in placing it as he did. But one species has yet been discovered.

THE VARIED CREEPING WARBLER.

MNIOTILTA VARIA.

PLATE XLI. FIG. 89 (MALE.)

(STATE COLLECTION. MALE AND FEMALE.)

Motacilla varia. LINNÆUS, Syst. Nat. 12 ed. Vol. I, p. 333.
White-poll Warbler. PENNANT, Arct. Zool. Vol. 2, p. 402.
Certhia maculata. WILSON, Am. Orn. Vol. 3, p. 23, pl. 19, fig. 3 (male).
Sylvia varia. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 81.
Certhia varia. AUDUBON, fol. pl. 90; Orn. Biog. Vol. 1, p. 152, and Vol. 5, p. 471.
Black and *White Warbler*, or *Creeper.* NUTTALL, Man. Orn. Vol. 1, p. 364.
Creeping Warbler. AUDUBON, B. of A. Vol. 1, p. 105, pl. 111. GIRAUD, Birds of Long island, p. 70.

CHARACTERISTICS. Varied with white and black. Throat black. *Female*, and *young of the year*, throat greyish. Length, 5·5.

DESCRIPTION. Bill somewhat dilated at the base, incurved, keeled, and compressed at the sides; lower mandible straight. Tail slightly emarginate, or even. Tips of the wings reaching to within half an inch of the end of the tail; the second quill rather longest.

COLOR. Above white varied with black. Rump black. A white stripe along the summit of the head and back part of the neck, bounded by black. Line above and below the eye white. Quills rusty brown, edged externally with soiled white. Wings with two white transverse bars. Inner webs of the tail-feathers marked with white. Beneath varied with black and white. *Female* and *young*, greyish tinged with rufous on the throat; beneath greyish. Sides and under tail-coverts marked with black. Eye-stripe obsolete. Sides of the neck dull rufous.

Length, 5·0 – 5·5.

This active little species is common throughout this State, making its appearance from the South in this vicinity about the middle of April, and leaving us the latter part of September. It is highly useful in destroying the various insects which hide themselves in the crevices of the bark of trees. Its eggs are described as whitish, with brownish red spots at the larger end. It has been noticed by Swainson in Mexico, and has also been observed as far north as 50°, although not noticed in the *Northern Zoology*. Peculiar to America.

GENUS TROGLODYTES. Vieillot. Cuvier.

Bill usually long, slender, sharp, compressed, without notch, or at least only a slight vestige. Nostrils oval, oblong, obvious, half closed by a membrane. Tongue slender, ending at the tip in two or three small rigid bristles. Tarsus longer than the middle toe, with eight anterior distinct scutellæ. Inner toe free; posterior with a larger nail than the rest. Wings short, rounded, concave, with a spurious feather: third, fourth and fifth quills longest. Female and male differ little in plumage. Tail usually erected. Live exclusively on insects.

Obs. This genus has been separated into two by modern systematists: In Troglodytes, the bill is slender from the base, the spurious feather moderate, and the hind toe equal to the inner; in Thryothorus, the bill is rather thick at the base, the spurious feather long and broad, and the hind toe longer than the inner. The genus, as it now stands, is very natural, does not comprise many species, and the distinctions do not appear of sufficient magnitude to require the introduction of a new genus.

THE HOUSE WREN.

Troglodytes ædon.

PLATE XLIII. FIG. 97.

(STATE COLLECTION. Male and female.)

Troglodytes œdon. Vieillot, pl. 107.
Sylvia domestica. Wilson, Am. Orn. Vol. 1, p. 129, pl. 8, fig. 3.
T. œdon et *furvus.* Bonaparte, Ann. Lyc. Vol. 2, p. 92 and 439.
House Wren. Audubon, folio, pl. 83 (male, female and young); Orn. Biog. Vol. 4, p. 409. Nuttall, Man. Orn. Vol. 1, p. 423, figure. Richardson, Northern Zoology, Vol. 2, p. 316. Audubon, Birds of Am. Vol. 2, p. 125, pl. 120. Giraud, Birds of Long island, p. 73.

Characteristics. Dark brown, banded with blackish; beneath dull greyish, with obsolete bands. Tail rather long and rounded. Length, $4\frac{1}{2}$ inches.

Description. Bill, measured along the upper surface, half an inch long, without the slightest appearance of a notch. Nostrils with a membrane above. Tail wedge-shaped, arched.

Color. Above deep brown, darkest on the head and neck, and lighter on the rump. All the feathers, except those of the head and neck, barred with dusky. Beneath, soiled white on the belly and vent; darker above, obscurely barred with dusky. Wings and tail strongly barred. Lower mandible flesh-colored.

Length, 4·5.

The *House Wren* is well known for his familiar habits and his usefulness. They build in boxes or houses prepared by man, laying from 6 to 9 reddish flesh-colored eggs, sprinkled with grains of a deeper tint. It arrives in the southern part of this State towards the end of April, and leaves us in September. It is stated in some works of authority, that this species is found nearly as far south as the equator; but as it has never been observed in the southern States, it is supposed to pass round this region, in order to avoid the *Great Carolina Wren*. The observation of Audubon (*Synopsis*, p. 75), appears more probable, namely, that it does not extend beyond Maryland, where it winters. This opinion he has subsequently modified, and supposes it to winter south of the United States. It has been observed as high as the 57th parallel, and across the continent to the Columbia river.

THE WOOD WREN.

Troglodytes americanus.

T. americana. Aud. Orn. Biog. Vol. 2, p. 452, and Vol. 5, p. 469. *T. americanus*, Id. B. of Am. Vol. 2, p. 123. *T. americanus, Wood Wren.* Giraud, Birds of Long island, p. 74.

Characteristics. Closely allied to the *House Wren*, but is larger, the bill more robust, and tail-feathers much longer; no light colored line over the eye. Length, 4·5 – 5·0 inches.

Description. Bill moderate, nearly straight, slightly declinate at the tip. Tarsus compressed, with seven scutellæ in front. Wings short; second quill much shorter than the third. Tail rather long, broad, graduated.

Color. Above dark reddish brown (duller on the head), and indistinctly barred with dark brown. Sides of the head, above the eye, with no light colored line. Edges of the outer primaries light colored. Beneath pale brownish grey; faintly barred on the foreneck, breast and sides. Under tail-coverts distinctly barred.

Length, 4·85.

I am only acquainted with this species through the description of Mr. Audubon, who noticed it in South-Carolina, Vermont and Maine. Mr. Giraud states that a few have been shot on Long island in this State. It has probably been confounded with the House Wren, and has thus been overlooked.

THE MOCKING WREN.

TROGLODYTES LUDOVICIANUS.

PLATE XLII. FIG. 94.

(STATE COLLECTION. MALE AND FEMALE.)

Sylvia ludoviciana. LATHAM, Index Ornith. sp. 150.
Certhia caroliniana. WILSON, Am. Orn. Vol. 2, p. 61, pl. 12, fig. 5.
T. (Thryothorus) ludovicianus. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 93.
The Great Carolina Wren. AUDUBON, folio, pl. 78; Orn. Biog. Vol. 1, p. 399.
Mocking Wren. NUTTALL, Manual Ornith. Vol. 1, p. 429, figure.
Great Carolina Wren. AUDUBON, Birds of Am. Vol. 2, p. 116, pl. 117 (male and female). GIRAUD, Birds of Long island, p. 75.

CHARACTERISTICS. Chesnut brown above. Wings and tail barred with brown; the coverts slightly tipped with white. Beneath rusty; vent light colored, barred. Throat, and stripe over the eye, whitish. *Female*, no white on the wing-coverts. Length, 5 – 6 inches.

DESCRIPTION. Bill stout, curved, and three-quarters of an inch long. Tail rounded, wedge-shaped; the two exterior feathers on each side being half an inch shorter. Wings short and broad. Nostrils oval, partly covered by a prominent convex membrane.

COLOR. A broad well defined streak of soiled white passes from the base of the bill, over the eye, and down the sides of the neck; beneath this, a stripe of reddish brown passes from the eye backward, to mix with the general color of the body above. Chin lightly tinged with rust. Throat and sides of the neck greyish white. Quills, coverts and tail barred with blackish brown.

Length, 5·5 – 6·0.

This large Wren, which in the southern and western parts of the Union is celebrated for his mimicry and powers of song, is but a rare visitor in this State, or at least has been rarely observed. I suspect that it even occasionally breeds here; for I have had specimens from Westchester and Rockland counties, which were taken as late as the middle of December. Its eggs are from 5 – 8, greyish, spotted with brown. It is a resident in the Southern States during the whole year, and ranges from Texas to New-York.

THE MARSH WREN.

TROGLODYTES PALUSTRIS.

PLATE XLII. FIG. 92.

(STATE COLLECTION. MALE.)

Certhia palustris. WILSON, Am. Orn. Vol. 2, p. 58, pl. 12, fig. 4.
Troglodytes palustris. BONAPARTE, Ann. Lyc. Nat. Hist. N. Y. Vol. 2, p. 93.
Marsh Wren. AUDUBON, fol. pl. 100; Orn. Biog. Vol. 1, p. 500, and Vol. 5, p. 467. NUTT. Man. Orn. Vol. 1, p. 439.
T. palustris. RICHARDSON, F. B. A. Vol. 2, p. 319. AUDUBON, B. of A. Vol. 2, p. 135, pl. 123 (male and female). GIRAUD, Birds of Long island, p. 72.

CHARACTERISTICS. Dark brown. Crown dusky brown: neck and back streaked with light color. A white stripe over the eye. Beneath glossy white; vent brownish. Length five inches.

DESCRIPTION. Bill curved, and so nearly entire that the notch can scarcely be observed with a lens. Tail short, rounded and erect. Wings short, with the fourth quills longest. Legs and feet large for the size of the bird. Tongue sharp, pointed, entire. Claws long, slender and arched.

COLOR. Above reddish brown. Wings darker; the feathers edged with lighter. The lores, a line from the eye, throat, breast and belly whitish. Sides of the breast obscurely barred with brown; flanks, thighs and vent tinged with brown. Tail dark towards the end, with 6 – 8 faint dark bars.

Length, 4·5 – 5·0.

This little wren, as its name implies, is chiefly found in marshes, where it constructs a curious pensile nest, laying from 6 – 8 small mahogany-colored eggs. I have been assured by intelligent witnesses that it is a highly musical species; singing, early in the spring, during the greater part of the night. It breeds in Pennsylvania, and probably in this State, but I have not yet met with its nest. It winters from Texas to Carolina, and migrates as far north as Massachusetts.

THE WINTER WREN.

TROGLODYTES HYEMALIS.

PLATE XLIII. FIG. 96.

(CABINET OF THE LYCEUM.)

Sylvia troglodytes. WILSON, Am. Orn. Vol. 1, p. 139, pl. 8. fig. 6.
Troglodytes hyemalis. VIEILLOT, Nouv. Dict. d'Hist. Nat.
T. europeus. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 93.
Winter Wren. AUDUBON, fol. pl. 360; Orn. Biog. Vol. 4, p. 430. NUTTALL, Man. Orn. Vol. 1, p. 427. AUD. B. of A. Vol. 2, p. 128, pl. 121 (male and female). GIRAUD, Birds of Long island, p. 72.

CHARACTERISTICS. Reddish brown, faintly barred with dusky; beneath dull rufous, with obsolete bars. Hind toe stout. Bill short. Length, $3\frac{1}{2}$ inches.

DESCRIPTION. Bill nearly straight, half an inch long. Tail short and rounded, scarcely more than an inch long. Wings rather short; the fourth quill longest.

COLOR. Above dark rufous brown, with numerous short interrupted bars of dusky. Head and neck plain, not barred nor spotted. Primaries crossed with alternate rows of black and whitish or yellowish white. Superciliary line, sides of the neck, of the head and breast soiled white, with obsolete longitudinal dusky stripes. Beneath reddish brown. Belly and vent barred with black and white. Bill dark brown above; yellowish beneath towards the base.

Length, 3·5 – 4·0.

This Wren, which is one of our smallest species, has for a long time been confounded with that of Europe, and is frequently also taken for the House Wren by casual observers. The following characteristics of *T. europeus* may serve to contradistinguish these closely allied species: "Greyish beneath; neck, breast, and anterior part of the body immaculate." This species, as its name would imply, remains with us during the winter, but in fact is found here during the whole year. My late collector, Mr. Ward, found them breeding in great numbers near Lake Oneida in July. They lay from 10 – 12 dull whitish eggs, with a few reddish spots at the larger end. Its geographical range east and west is very extensive, reaching acrosss the continent: its latitudinal range is more limited, being included between the 38th and 50th parallels.

THE SHORT-BILLED WREN.

TROGLODYTES BREVIROSTRIS.

PLATE LXII FIG. 93.

(CABINET OF THE LYCEUM.)

T. brevirostris. NUTTALL, Trans. Am. Philos. Soc. Vol. 5. p. 98 (figure).
The Short-billed Marsh Wren. NUTTALL, Man. Orn. Vol. 1, p. 436 (figure).
T. id. AUDUBON, fol. pl. 175; Orn. Biog. Vol. 2, p. 427, and Vol. 5, p. 469; B. of A. Vol. 2, p. 138, pl. 124 (male and female).

CHARACTERISTICS. Bill shorter than the head, which is striated. Above brown, varied with rufous and whitish; wings and tail barred; beneath pale rufous; throat and centre of breast white. Length, four and a half inches.

DESCRIPTION. Bill slightly curved and compressed, half an inch long from the angle of the mouth to the tip. Tail much rounded, and about an inch in length. Tarsus 0·7 long. Claws very small when compared with those of the *T. palustris*. Wings short, very convex; the second, third and fourth primaries subequal.

COLOR. Above blackish brown, varied with white and rufous chiefly along the shafts of the feathers. Summit of the head with blackish interrupted stripes. Wings dusky, barred with rufous and white or whitish on the outer webs. A light colored streak over the eye. Sides of the breast, the belly and vent pale rust-color. Beneath, the wings obscurely barred. Thighs rufous.

Length, 4·0 – 4·5.

This little Wren, which is allied in its habits to the *palustris*, was first detected by Nuttall. It does not appear to be a numerous species in this State. According to Nuttall, it constructs a highly artificial nest in sedge grass, and lays from 6 – 8 pure white eggs. It arrives here at the latter end of April, and leaves in September: winters, according to Audubon, from Texas to South-Carolina. In summer it has been observed in Massachusetts. The specimen which is figured in the plate, was taken near Tappan, Rockland county.

(*EXTRA-LIMITAL.*)

T. obsoletus. (BONAP. Am. Orn. Vol. 1, pl. 1.) Brownish waved with pale; beneath whitish marked with brown. Tail long, rounded. Bill an inch long, slender, notched. Length six inches. *Rocky mountains, Columbia river.*

T. bewicki. (AUD. B. of A. pl. 118.) Chesnut-brown; beneath cinereous inclining to white: a pale yellowish stripe over the eye and down the neck. Tail long, graduated. Lateral feathers spotted, and external barred with black and white. Length, five inches. *Southern States.* Rare.

T. parkmani. (AUD. B. of A. pl. 122.) Bill longer, stouter and more curved than in *hyemalis*. Fourth quill longest. Reddish brown above, faintly barred; beneath dull brownish white; sides barred; lower wing-coverts and axillaries greyish, obscurely barred. Length, four inches. *Columbia river.*

FAMILY PARIDÆ.

Bill short, straight, robust. Upper mandible slightly curved above, waved on its edges: notches obsolete. Nostrils basal, rounded, concealed by incumbent feathers. Tarsus with eight distinct scutellæ: three anterior toes united as far as the second joint. Wings moderate; the third, fourth and fifth quills longest. Tongue truncated at tip, ending in four bristles. Plumage long and full. Tail long, of twelve narrow feathers.

Obs. This group, which in Bonaparte's arrangement forms a subdivision of his great family Turdidæ, including Regulus, we think is entitled to form a separate family by itself, including as yet but one genus from which it takes its name.

GENUS PARUS. Linnæus.

Bill stout, short, compressed, entire, with bristles at the base. Upper mandible longest, rounded above. Nail of the hind toe strongest and most curved. Other characters of the family as noted above.

Obs. This genus, as at present restricted, comprises six American species.

THE CRESTED TIT.

Parus bicolor.

PLATE XLV. FIG. 101.

(STATE COLLECTION. Male and Female.)

Parus bicolor. Linnæus, Syst. Nat. 12 ed. p. 340.
The Crested Titmouse. Wilson, Am. Orn. Vol. 1, p. 137, pl. 8, fig. 5. Audubon, folio, pl. 39; Orn. Biog. Vol. 1, p. 199, and Vol. 5, p. 472.
The Tufted Titmouse. Nuttall, Man. Orn. Vol. 1, p. 236, figure.
The Crested Titmouse. Audubon, B. of A. Vol. 2, p. 142, pl. 125.
The Crested Titmouse, P. bicolor. Giraud, Birds of Long island, p. 78.

Characteristics. Crested. Leaden blue above; beneath whitish; flanks tinged with dull yellowish brown. Length, six and a half inches.

Description. Bill very robust, obtusely elevated above, slightly bent at the tip. The third and fourth quills subequal, longest. Crest high and pointed. Tarsus rather longer than the middle toe. Tail even, slightly emarginate.

Color. Upper parts plumbeous. Frontlet, bill and shoulder black. Space before the eyes grey. Feet leaden blue. Beneath greyish; the sides light yellowish tinged with red. *Female:* The rump reddish; space before the eyes drab.

Length, 6·0 – 6·5.

This lively and noisy bird appears in the southern counties of our State about the first of

May, and remains with us until very late in the autumn, and indeed may be said to be a constant resident. It feeds on nuts and hard seeds, which it breaks in a similar mode to that used by the Nuthatch. It also destroys large quantities of insects and their larvæ. The eggs, six in number, are white with sprinkled red at the larger end. It ranges from 30° to 70° north, although unnoticed in the Boreal Fauna of Richardson. Occurs throughout the northern regions of Europe and America.

THE BLACK-CAP TIT.

Parus atricapillus.

PLATE XLV. FIG. 100 (Male).

(STATE COLLECTION.)

Parus atricapillus. Linnæus, Syst. Nat. 12 ed. p. 341.
Black-capped Titmouse. Wilson, Am. Orn. Vol. 1, p. 134, pl. 8, fig. 4. Audubon, folio, pl. 353; Orn. Biog. Vol. 4, p. 374.
Chickadee. Nuttall, Manual Ornith. Vol. 1, p. 241, figure.
P. atricapillus. Richardson, F. B. A. Vol. 2, p. 226.
Black-cap Titmouse. Audubon, B. of A. Vol. 2, p. 146, pl. 126 (male and female).
Id., P. atricapillus. Giraud, Birds of Long island, p. 77.

Characteristics. Not crested. Grey tinged with brown; crown, neck and throat black; cheeks and beneath whitish. Tail two inches long. Length, 5½ inches

Description. Bill short, stout. Tarsus compressed. Third and fourth quills longest, subequal; the first and seventh subequal. Tail long, slightly emarginate, rounded, extending 1·25 beyond the tips of the closed wings. Plumage long, soft and downy.

Color. Crown and throat deep black, with purplish tints. From the base of the bill, a white space extends backwards, dilating over the cheeks, and, with the white on the upper part of the breast, forms a species of white collar almost surrounding the neck. Above greyish ash, tinged with brown. Rump ferruginous. Beneath whitish, or tinged with greyish brown. Sides of the breast and vent pale rusty. Quills light brownish; their outer edges dull white; the outer edges of the secondaries and external tail-feathers bluish or dull white.

Length, 5·0 – 5·5.

This species is considered by Temminck and Nuttall as identical with the *palustris* of Europe. It is larger, however, and its tail proportionally longer, the black on the throat descends lower, the colors are more pure and distinct, and its voice and habits are different. It is, however, a closely allied species.

The *Black-cap Titmouse*, or *Chickadee*, is a truly northern species; so abundant indeed are they in the fur countries, that a family of them may be found in almost every thicket. They are equally numerous in our State, particularly in the northern counties, throughout the year. In the southern district it is rather rare. I have seen it in this vicinity in the depth of winter, when the whole country was buried under a deep snow. It feeds on seeds and nuts, and also on spiders, canker-worms, and other injurious insects. It has been observed as far

north as the 65th parallel, and, according to Audubon, has been seen as far south as Maryland. It has also been noticed in Kentucky. It builds its nest usually in the hole of a squirrel or woodpecker, laying from 6 – 8 pure white eggs, and often raising two broods in a year. Some writers describe the eggs as minutely sprinkled with red.

THE CAROLINA TIT.

PARUS CAROLINENSIS.

PLATE LIV. FIG. 123.

(STATE COLLECTION.)

Parus carolinensis. AUDUBON, folio, pl. 160; Ornith. Biog. Vol. 2, p. 341, and Vol. 5, p. 474. BONAPARTE, Com. and Geog. List, p. 20. AUDUBON, Birds of Am. Vol. 2, p. 152, pl. 127 (male and female).

CHARACTERISTICS. Smaller than the preceding. Ash grey above. Cheeks greyish white. Tail emarginate. Length, 4½ inches.

DESCRIPTION. Plumage long and loose; the third and fourth quills longest; the first and seventh subequal.

COLOR. Crown, hind head, throat and upper part of the neck pure black. Cheeks greyish, becoming lighter towards the eyes. Quills and tail-feathers margined with greyish. Beneath greyish, and tinged with rufous on the sides.

Length, 4·25 – 4·5.

This southern species has not, until recently, been detected in this State. Mr. Bell informed me, three years since, that he had reason to believe that a species closely resembling the *Chickadee*, but smaller, and with a different note, existed in this State during the winter. He succeeded recently in obtaining a specimen in Rockland county, which proved to be the *Carolina Tit*. It chiefly affects low marshy situations, and is more shy than the Chickadee. It is a resident in the southern States, and has been observed in Texas. Its extreme northeastern range along the Atlantic is in this State, although it may be found still farther north, having been taken hitherto for the Chickadee.

(*EXTRA-LIMITAL.*)

P. hudsonicus. (AUD. B. of A. Vol. 2, pl. 128.) Rufous brown above. Cheeks with a narrow band of white. Beneath white; rufous on the sides. Length, 5 inches. *Labrador, Maine.*

P. rufescens. (ID. pl. 129.) Bright chesnut above; the white cheek band curving upon the back. Head, throat and sides of the neck dark brown. Length, 4½ inches. *Columbia river.*

P. minimus. (ID. pl. 130.) Greyish brown above. Crown and hind head reddish brown. Tail more than two inches. Length, 4½ inches. *Columbia river.*

P. leucotis. (GIRAUD, B. of Texas, plate.) Red cheeks satin white. Tail long, graduated. Length, 4·9. *Texas.*

FAMILY SYLVIADÆ.

Bill moderate, slender, straight, rather broader than high at the base. Upper mandible a little bent at the tip, slightly notched on the edges. Bristles short, or weak at the base. Nostrils basal, oval or oblong. Tarsus compressed, with seven scutellæ in front. Toes moderate, compressed; the third longest; the second and fourth subequal. Tail moderate or long, of twelve feathers. Tongue slender; tip bifid and lacerated.

Obs. This family, as at present restricted, contains but two American genera. In the outlines of the General System proposed by Charles Bonaparte, it comprises two of the subdivisions of the large family Turdidæ, embracing many European species.

GENUS REGULUS. Ray.

Bill short, straight, subulate, very slender, with short bristles at the base. Edge of upper mandible slightly notched, and a little curved at the tip. Nostrils elliptical, half closed by a membrane covered by small reversed feathers. Tarsus slender, longer than the middle toe, much compressed; the lower four scutellæ only distinct: hind toe stoutest, with a larger and thicker nail. Feathers of the head elongated and silky. Spurious feather very short: third and fourth quills longest; the first and seventh subequal. Tail emarginate.

THE GOLDEN-CRESTED KINGLET.

Regulus satrapa.

PLATE XLIII. FIG. 95.

(STATE COLLECTION. Male and female.)

Sylvia regulus. Wilson, Ornith. Vol. 1, p. 126, pl. 8, fig. 2 (male).
Regulus cristatus. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 91.
Golden-crowned Goldcrest. Id. Am. Orn. Vol. 1, p. 22, pl. 2, fig. 4 (female).
American Fiery-crowned Wren. Nuttall, Man. Ornith. Vol. 1, p. 420.
Regulus tricolor. Audubon, folio, pl. 183 (m. and f.); Orn. Biog. Vol. 2, p. 476.
R. satrapa, Lichtenstein. Audubon, Birds of Am. Vol. 2, p. 165, pl. 132 (m. and f.).
R. reguloides. Jardine, Ed. of Wils. and Bonap. Vol. 1, p. 127.
R. satrapa. Giraud, Birds of Long Island, p. 80.

Characteristics. Olive green; beneath whitish. Crown orange margined with black; cheeks greyish. Bill slender from the base. *Female:* crown lemon-yellow; beneath dull greyish. *Young:* crown golden-yellow.

Description. Front descending rather abruptly. Bill 0·2 long, depressed at the base, compressed at the tip, with an obsolete notch on the edge of the upper mandible. Nasal membrane covered by a single recumbent decompound feather. A long undivided plate on the upper part of the tarsus, with a few scutellæ beneath. The third quill slightly longest. Feathers of the tail narrow, acuminate. Bristles at the base of the bill.

Color. Above greenish olive; the hind head plumbeous. Frontlet, line over and beneath the eye light ashen. Summit of the head yellow margined with black; in the centre of this yellow crown is a longitudinal stripe of flame color: the lateral feathers in the black border, and the yellow feathers above, are long, and capable of concealing the brilliant crown. Beneath greyish, with a slight greenish tinge. Wings and tail dusky. Greater wing-coverts with a white bar across the tips; another small white bar above this, formed by the tips of the upper wing-coverts. An irregular large black spot on the secondaries, the edges of which are olive. Quills bordered with yellowish. *Female*, without the red streak on the crown; frontlet and line over the eye dark ashen grey.

Length, 4·0. Alar extent, 7·0.

This bird was for a long time confounded with its closely allied species, the *cristatus* of Europe. Nuttall, we believe, was the first who suggested the idea of its being specifically distinct; but his name, *tricolor*, as well as that of Jardine, yields to the prior appellation given by Lichtenstein. It is extremely active and restless, feeding on minute insects, which it takes on the wing or extracts from the crevices of trees. It is a rare bird in this State, and the only specimens I have seen from this region are those described above. Its geographical range, as far as ascertained, appears to be between the 23d and 54th parallels. It has been observed breeding in Labrador, and in the autumn leaves the northern regions, passing through the United States as far as Mexico. Its history is incomplete. According to Mr. Giraud, it appears with us in April and May on its northern migration; and on its return, from September to December.

THE RUBY-CROWNED KINGLET.

REGULUS CALENDULA.

PLATE LIII. FIG. 119.

(STATE COLLECTION. MALE AND FEMALE.)

Motacilla calendula, LINNÆUS, GMELIN.
Ruby-crowned Warbler. PENNANT, Arct. Zool. Vol. 2, p. 413.
Sylvia calendula. WILSON, Am. Orn. Vol. 1, p. 83, pl. 5, fig. 3
Regulus calendulus. STEPHENS, Shaw's Zool. Vol. 10, p. 760.
Ruby-crowned Regulus. AUDUBON, fol. pl. 105; Orn. Biog. Vol. 2, p. 516.
Ruby-crowned Wren. NUTTALL, Man. Orn. Vol. 1, p. 415.
Ruby-crowned Kinglet. AUDUBON, B. of A. Vol. 2, p. 168, pl. 133 (male and female).
Regulus calendula. GIRAUD, Birds of Long Island, p. 79.

CHARACTERISTICS. Olivaceous. Crown vermilion, not margined with black. Sexes similar. Length, 4½ inches.

DESCRIPTION. Bill slender, notched near the tip, which is slightly bent. Tail moderate, emarginate.

COLOR. Greenish olive above. Wings and tail dusky brown, edged with greenish-yellow. Secondaries, and the first row of wing-coverts edged and tipped with whitish. Head, crown and hind head vermilion. A ring of yellowish white around the eye. Beneath greyish white. Bill black, yellow along the edge. Legs and toes dusky brown. *Female:* the markings similar, but the tints less bright. *Young:* crown of the head wanting the vermilion spot.

Length, 4·5. Alar extent, 6·0.

This active little crested bird is a northern species, and reaches this State from the north in November, frequently staying with us the whole winter. The greater number, however, appear about the middle of April from the South; but after a very short stay, pursue their journey northward. Nothing is known of its incubation, and little of its habits, except that it feeds on small seeds, on insects which infest trees, and their lurking larvæ. Geographical range between 24° and 70° north latitude.

(*EXTRA-LIMITAL.*)

R. cuvieri. (AUD. B. of A. pl. 131.) Greyish olive above; beneath grey. Crown vermilion: a black band from the frontlet, passing through the eye. Length, 4¼ inches. *Philadelphia.* Rests on the authority of a single specimen. An var. *satrapæ?*

R. trochilus. (TEMM. pl. 651.) Pale olive. A line of yellow above the eye. Beneath yellowish white. Wings and tail grey-brown, edged with olive. Tail an inch longer than the wings. Length, 5 inches. *Southern States and Europe.*

GENUS SIALIA. Swainson.

Bill short, nearly straight, subulate, wider than high at the base, cleft nearly to the eyes, furnished with bristly feathers at the base. Upper mandible carinated, somewhat abruptly curved, and convex at the tip, where it is distinctly notched. Nostrils basal, partly closed by a membrane. Tongue cartilaginous, with the point slit. Tarsus shorter than the middle toe and claw; its lower scutella only distinct. Hind nail stoutest, arcuated, shorter than the toe. Wings rather long, pointed: second and third quills longest.

THE BLUEBIRD.

Sialia wilsoni.

PLATE LXIV. FIG. 93

(STATE COLLECTION. Male and female.)

Motacilla sialis. Linnæus, Syst. Nat. p. 336.
The Bluebird. Wilson, Am. Orn. Vol. 1, p. 56, pl. 3, fig. 3 (adult male).
Saxicola sialis. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 89.
Sylvia sialis. Audubon, fol. pl. 113; Orn. Biog. Vol. 2, p. 84, and Vol. 5. p. 452.
Sialia wilsoni. Swainson, Zool. Journal, Vol. 3, p. 173.
Ampelis sialis. Nuttall, Manual Orn. Vol. 1, p. 444, figure.
Erythraca (Sialia) wilsoni. Richardson, F. B. A. Vol. 2, p. 210.
Sialia wilsoni. Audubon, B. of A. Vol. 2, p. 171, pl. 134 (male, female and young).
Bluebird, S. wilsoni. Giraud, Birds of Long island, p. 81.

Characteristics. Blue. Beneath bright reddish; belly and vent white. *Young*, dusky spotted with white. Length, 7 inches.

Description. Wings full and broad. Eyes large. Tail long, broad, slightly emarginate, even; its feathers broad and rounded. Plumage slightly glossy.

Color. Above a rich azure blue; the inner vanes of the quills, and their shafts, dusky; the outer blue. Throat and upper part of the breast bright reddish brown. Belly and vent white. Bill and legs black. Inside of mouth and soles of the feet yellow. Iris golden. *Female:* Head and back, excepting the wings, dull leaden, with faint tints of blue. *Young*, brownish above; beneath greyish, tinged with brown.

Length, 6·5 – 7·0. Alar extent, 9·5 – 10·0.

The *Bluebird*, or *Blue Robin* as it is often called in the western counties, resembles very much in its manners and habits the *Saxicola rubicola*, or *Robin Redbreast* of Europe, and is hailed with us as the first harbinger of spring. A few individuals contrive, by seeking out some warm sunny spot, to linger out the winter with us; but this is a rare occurrence. They appear in the southern counties about the middle of March, and sometimes even earlier. In

the autumn, usually in November, it leaves us for the south as far as Mexico, where it was noticed by Lichtenstein. Along the Atlantic, it ranges to Nova-Scotia. It is very prolific, laying 4 – 6 blue unspotted eggs, and raising several broods in the year. It is very useful in destroying multitudes of noxious insects. In the autumn they feed on cedar berries, wild cherries, etc. This species has exercised the ingenuity of systematists, having been originally a *Motacilla*, and then successively a *Sylvia*, *Saxicola*, *Parus*, *Œnanthe*, *Vitiflora*, *Ampelis*, *Erythraca* and *Sialia*. I do not admit the propriety of changing its specific name. The genus Sialia, however, is a good one, and forms a natural passage to the next family.

(*EXTRA-LIMITAL.*)

S. occidentalis. (Aud. B. of A. pl. 135.) Bright ultramarine blue. A broad band across the back, and the scapulars chesnut red. Tail deeply emarginate. *Female*, light greyish brown tinged with blue. Length, 7 inches. *Pacific coast, Columbia river, Texas.*

S. arctica. (Id. pl. 136.) Light azure blue; beneath light greenish blue. Quills and larger coverts dusky. *Female:* breast greyish brown. Length, 7¼ inches. *Columbia river, Northern regions, and* (according to Mr. Giraud) *Texas.*

FAMILY MERULIDÆ.

Bill short or moderate, straight, with bristles at the base. Upper mandible slightly rounded and curved; the tip small, with a small notch: the lower shorter, straight. Nostrils rounded. External aperture of ears large and rounded. Tarsus compressed, with seven anterior scutellæ. Feet rather robust. Wings short or moderate, broad, rounded. Tail various, of twelve feathers. Tongue cartilaginous, bifid at tip.

Obs. This family, which is essentially the same with the *Turdinæ* of Audubon, comprises a portion of the section *Saxicolinæ* of the great family Turdidæ of Bonaparte. As we restrict it, it comprises three American genera, Orpheus, Merula, and Cinclus.

GENUS ORPHEUS. Swainson.

Bill elongated, slender, and more curved than the following genus. Feet of moderate length, slender. Wings short and rounded; fourth and fifth quills longest. Tail very long, straight, much rounded or even graduated.

THE COMMON MOCKING-BIRD.

ORPHEUS POLYGLOTTUS.

PLATE XXXIX. FIG. 84.

(STATE COLLECTION.)

Turdus polyglottus, LINNÆUS. WILSON, Am .Orn. Vol. 2, p. 13, pl. 10, fig. 1.
The Common Mocking-bird. AUDUBON, pl. 21; Orn. Biog. Vol. 1, p. 108, and Vol. 5, p. 438. NUTTALL, Man. Orn. Vol. 1. p. 320, figure.
Mimus polyglottus. BONAPARTE, Geographical and Comparative List, p. 17.
Orpheus polyglottus. AUDUBON, B. of A. Vol. 2, p. 187, pl. 138.
O. id., Grey Mocking-bird. GIRAUD, Birds of Long island, p. 82.

CHARACTERISTICS. Ash-colored. Eyebrows and beneath whitish; base of the primaries, tips of the coverts and the lateral tail-feathers white. Tail wedge-shaped. Length, 9 – 10 inches.

DESCRIPTION. Above ash-colored: the wings and tail dark brown; the first and second rows of coverts tipped with white. The first four quill-feathers are white at their bases, as far as the tips of their coverts; the remainder are white to a greater extent, but much variety is observed among individuals in this respect. The two outer tail-feathers white; the remainder, except the two middle ones, tipped and sometimes spotted with white. Chin white; the remaining under parts light ashen grey, the base of the feathers being slate. Bill, legs and feet black: base of the lower mandible light colored. *Female:* the white spot on the primaries less clear, and not spreading over more than seven or eight of the primaries, and extending farther down on the inner web. The back is rather more inclined to brown. *Young*, spotted on the breast.

Length, 10·0. Alar extent, 14·0.

The *Mocking-bird*, the peculiar ornament of the forests of the Southern and some of the Middle States, is comparatively rare in New-York, although some are occasionally found in Rhode-Island and Massachusetts. The specimen figured in the plate, was shot in Rockland county. I have seen them occasionally in Queens county, where, indeed, I have been assured that they breed; but my information is not to be implicitly relied on. The unrivalled powers of song attributed to this bird are too well known to be repeated here. It is found 25 degrees south of the equator, and ranges to 44° of north latitude. It lays 4 – 6 pale green eggs, spotted and blotched with brown. It has been observed with us towards the end of May. Its food is various, consisting of berries of the holly, sumach, etc., and of insects, worms and spiders. Peculiar to the torrid and temperate zones of the two Americas.

THE BROWN THRUSH.

ORPHEUS RUFUS.

PLATE XXXVIII. FIG. 82.

(STATE COLLECTION. MALE AND FEMALE.)

Ferruginous Thrush. WILSON, Am. Orn. Vol. 2, p. 83, pl. 14, fig. 1.
Turdus rufus. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 75.
Ferruginous Thrush. AUDUBON, folio, pl. 116; Orn. Biog. Vol. 2, p. 102, and Vol. 5, p. 411.
Ferruginous Thrush or *Thrasher.* NUTTALL, Man. Orn. Vol. 1, p. 328.
Fox-colored Mocking-bird. RICHARDSON, F. B. A. Vol. 2, p. 189.
Ferruginous Mocking-bird. AUDUBON, B. of A. Vol. 3, p. 9, pl. 141 (male and female).
Ferruginous Thrush. GIRAUD, Birds of Long Island, p. 85.

CHARACTERISTICS. Reddish brown; beneath whitish, spotted with black. Wings with two whitish bands. Length, 10 – 11 inches.

DESCRIPTION. Bill long and rounded; the notch obsolete. Wings rounded, three and a half inches shorter than the tail; the outer feathers of the tail an inch shorter than the middle ones. Feet robust.

COLOR, Above bright reddish; beneath yellowish white; the breast and sides with arrow-headed dark brownish spots. Wings above with two series of white spots, forming bars. Lower mandible whitish at its base. Iris yellow. Legs dusky black. *Female:* Bars on the wings more narrow, and the spots on the breast smaller.

Length, 11·5 – 21·0. Alar extent, 13·0 – 13·5.

This delightful songster has various popular names in different districts. He is called the *French Mocking-bird*, *Ground Thrasher*, *Ground Mocking-bird* and *Brown Thrasher*. Although a few have been known to remain during a mild winter in the State, yet it usually winters farther south. It ranges throughout North America from 30° to 54° north. It usually arrives here from the south towards the end of April, and breeds in every part of the State. Its nest is built on or near the ground; the eggs are from four to six, greenish white, with numerous dots of brown ("dull buff," *Audubon*). It feeds on worms, insects and various kinds of berries, and is readily domesticated.

THE CAT-BIRD.

Orpheus carolinensis.

PLATE XXXIX. FIG. 85 (Male).

(STATE COLLECTION.)

Muscicapa carolinensis. Linnæus, Syst. Nat.
Turdus lividus, Cat-bird. Wilson, Am. Orn. Vol. 2, p. 90, pl. 14, fig. 3.
T. felivox, Vieillot. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 75. Audubon, folio, pl. 128; Orn. Biog. Vol. 2, p. 171, and Vol. 5, p. 410. Nuttall, Manual Orn. Vol. 1, p. 332, figure.
Orpheus felivox. Richardson, F. B. A. Vol. 2, p. 192.
The Cat-bird. Audubon, B. of A. Vol. 2, p. 195, pl. 140 (male and female).
Black-capped Thrush, O. carolinensis. Giraud, Birds of Long island, p. 85.

Characteristics. Deep slate; beneath paler. Vent rufous. Crown and tail black. Length, 9 inches.

Description. Bill compressed on the sides, with rather an acute ridge above; the tip slightly bent. Notch near the tip, very minute: at the corners of the mouth, 2 – 4 rigid bristles directed forwards. Wings short, from two to two and a half inches shorter than the tail. Nostrils basal, nearly closed above by a membrane, and partly concealed by feathers. Fourth and fifth primaries subequal, longest.

Color, as given above: bill black; feet blackish brown. Occasional piebald varieties have been seen. *Young:* feathers of the vent simply tinged with reddish.

Length, 9·0. Alar extent, 12·0.

This familiar bird ranges from Mexico to the 54th degree of north latitude, where it was seen by Richardson. It arrives in this State at the beginning or middle of April, according to the temperature of the season. It lays 4 – 5 unspotted greenish eggs. Food, berries, worms, wasps and other insects. One of our most useful birds, but usually doomed to persecution and death by thoughtless ignorance. Its notes are eminently beautiful, although few suppose it capable of emitting any other sound than the harsh and discordant *mew* which has given rise to its trivial name. I see no reason for following the modern writers in altering its linnean specific appellation.

(*EXTRA-LIMITAL.*)

O. montanus. (Aud. B. of A. pl. 139.) Greyish brown: tips of secondary coverts, edges of quills, and a large spot at the end of the three outer tail-feathers, white; light colored beneath, with arrow-headed spots. Length, 8 inches. *Rocky mountains.*

GENUS MERULA. Ray.

Bill, moderate or short, rather robust, straight. Feet long, somewhat robust. Third and fourth quills longest. Tail moderately long, even.

THE AMERICAN ROBIN.

MERULA MIGRATORIA.

PLATE XXXVIII. FIG. 83.

(STATE COLLECTION.)

T. migratorius, Linnæus. Wilson, Am. Orn, Vol. 1 p. 35, pl. 2, fig. 2. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 75.
American Robin, or *Migratory Thrush*. Nuttall, Man. Orn. Vol. 1, p. 338, figure. Audubon, folio pl. 131; Orn. Biog. Vol. 2, p. 190, and Vol. 5, p. 442.
Merula migratoria. Richardson, F. B. A. Vol. 2, p. 176.
Robin, or *Migratory Thrush*. Audubon, B. of A. Vol. 3, p. 14, pl. 142.
Reb-breasted or *Migratory Thrush*. Giraud, Birds of Long island, p. 86.

Characteristics. Dark greyish; beneath reddish. Head and tail black; the latter with the two exterior feathers white at the inner tip. Length, $9\frac{1}{2}$ inches.

Description. Throat, and a few spots occasionally forming a ring around the eyes, white. Bill yellow. Beneath reddish, more or less deep according to the season of the year; abdomen white. Throat whitish, thickly streaked with black. All above a dark dull greyish brown. *Young*, pale reddish beneath, thickly spotted with black.

Length, 9·0 – 10·0.

This familiar species is a resident in this State throughout the year, and those which thus remain probably advance farther north to breed. The eggs are from 4 – 6, bluish green, unspotted. They feed on worms, insects, berries and fruits, and range from the equator to the 67th degree of north latitude. Its popular name was given to it by the early English colonists, from its supposed resemblance to the *S. rubicola* or *Robin Redbreast* of Europe.

THE WOOD THRUSH.

MERULA MUSTELINA.

PLATE XXXIX. FIG. 86.

(STATE COLLECTION.)

Turdus melodus, Wood Thrush. WILSON, Am. Orn. Vol. 1, p. 29, pl. 2, fig. 1.
T. mustelinus, GMELIN. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 75. AUDUBON, folio, pl. 73; Orn. Biog. Vol. 1, p. 372, and Vol. 5, p. 446.
Wood Thrush. NUTTALL, Manual of the Ornithology of U. S. Vol. 1, p. 343. AUDUBON, Birds of Am. Vol. 3, p. 24, pl. 144. GIRAUD, Birds of Long island, p. 88.

CHARACTERISTICS. Reddish brown: rump and tail inclining to olive; beneath white, spotted with blackish. Eyes margined with whitish. Tail short, slightly emarginate. Length, 8 inches.

DESCRIPTION. Bill short, carinate above; mandibles subequal. Nostrils subovate, large. Wings an inch shorter than the tail; the extended legs reaching beyond the tail. Third and fourth quills longest, subequal; second equals the fifth: outer webs of the third, fourth and fifth obliquely sinuated.

COLOR. Above dull brown, becoming more fulvous on the head and olivaceous on the rump. Extremities of the quills, and upper side of the tail, greenish brown. Vent and central part of the throat pure white. Sides of the neck, breast and belly, with round heart-shaped deep brown spots.

Length, 7·5 – 8·0. Alar extent, 13·0.

This little Thrush reaches this State (where it breeds) about the beginning of May. It has various popular names, such as *Wood Robin, Ground Robin* and *Little Brown Thrasher.* Its food consists of various berries, caterpillars, etc. It is well known for its distinct, rich and varied song. It is shy and retired in its habits; and its eggs, except in size, do not differ from those of the Robin. It ranges from Mexico to the 50th degree of north latitude, and is found during the whole winter in Louisiana.

THE HERMIT THRUSH.

MERULA SOLITARIA.

PLATE XXXVII. FIG. 80.

(STATE COLLECTION.)

Turdus solitarius. WILSON, Am. Orn. Vol. 5, p. 95, pl. 43, fig. 2.
T. minor. BONAPARTE, Ann. Lyc. Vol. 2, p. 75.
T. id, Hermit Thrush. AUDUBON, pl. 58; Orn. Biog. Vol. 1, p. 303, and Vol. 5, p. 415.
Little or *Hermit Thrush.* NUTTALL, Man. Ornith. Vol. 1, p. 346.
Merula solitaria. RICHARDSON, F. B. A. Vol. 2, p. 184, pl. 35.
T. solitarius. AUDUBON, Birds of Am. Vol. 3, p. 29, pl. 146.
T. minor, Hermit Thrush. GIRAUD, Birds of Long island, p. 90.

CHARACTERISTICS. Dark ferruginous brown, inclining to reddish on the tail; beneath white, with arrow-headed spots. Tail short, emarginate; under tail-coverts pale buff. Third, fourth and fifth primaries longest; second and fifth subequal. Length, 6 – 7 inches.

DESCRIPTION. Bill moderate, with the notch at the tip, small but distinct.

COLOR. Above brown, with a ferruginous tinge on the primaries, tail-coverts and tail. Chin greyish white. Sides of the head and neck dull yellowish, with a dark brown arrow-headed spot on the tips of many of the feathers of the breast. Upper mandible blackish; lower yellowish, darker towards the tip.

Length, 6·5 – 7·5. Alar extent, 10·5 – 11·0.

The *Hermit Thrush*, as its name implies, is a shy solitary bird, resembling in its general color the European Nightingale, and scarcely inferior to that bird in its low-toned and melodious notes. It is readily distinguished from the preceding, by its smaller size, and the peculiar shape of its spots beneath. It is found in every part of the State, which it reaches from the south about the middle of May. Its eggs are pale greenish blue, spotted with olive. It ranges from Mexico to the fiftieth parallel of latitude.

THE OLIVE-BACKED THRUSH.

MERULA OLIVACEA.

Turdus olivaceus. GIRAUD, Birds of Long island, p. 91.

CHARACTERISTICS. Uniform yellowish brown above. Breast and throat buff, with small sagittate black spots: outer webs of the primaries yellowish; lower tail-coverts white. Length, 7 inches.

DESCRIPTION. Second quill-feather longest; the first and third equal. Tarsi one inch long. Bill short and robust.

COLOR. Uniform dark olive brown above. Sides of the neck, circle round the eye, and a line from the bill to the eye, rufous. Throat cream-color, inclining to rufous; fore part of the throat with arrow-headed spots, smaller and more distinct than in *M. solitaria*. Sides light greyish brown: under tail-coverts pure white; abdomen white, spotted with light greyish brown. Bill dark brown, approaching black.

Length, 7·0.

For the first detection of this species, we are indebted to the late H. C. De Rham of this city, a young man of singular attainments and great zeal in the investigation of our ornithology. He died in consequence of fatigue and exposure to the sun in Carolina, while in the pursuit of his favorite studies. He furnished me with the following note, which I believe was subsequently read before the Lyceum of Natural History:

"Having been struck by the difference between the figures of the Hermit Thrush as given by Wilson and Audubon, I was led to examine numerous specimens, and observed very remarkable discrepancies, such as induced me to suspect the existence of two distinct species. One, agreeing with Audubon's figure and the descriptions of Bonaparte and Nuttall, being yellowish brown above, inclining to rufous on the tail-coverts and tail, the outer webs of the primaries being of the same color; the other agreeing with Wilson's figure, the whole upper parts being of a yellowish brown, rather lighter than in the thrush figured by Audubon, without the rufous tail, and the outer webs of the primaries inclining to yellowish instead of rufous. The description of Wilson is so vague, that it may apply to either. The relative length of the folded wing, and of the primaries, is also very striking. In Wilson's, the wings reach to within an inch of the tail; those of Audubon to within an inch and a half. In Wilson's, the third is longest, the second and fourth equal; in that described by Audubon, the fourth longest, the third and fourth subequal. Mr. Audubon cites the *minor* of Richardson merely as a synonime of *wilsoni*, while Bonaparte notes it as a distinct species. I do not undertake to say whether two species have been confounded under one name, but it is certainly singular that such marked differences should occur in birds shot at the same season of the year."

I had been previously struck with great discrepancies between many specimens which

had been sent to me under the name of *Hermit Thrush*, and which I had supposed to form strongly marked varieties dependant upon age. A reëxamination of the subject induced me to coincide in opinion with my late estimable friend, and I had given it a name, which it is now unnecessary to cite, as it has been already well designated by Mr. Giraud.

The *Olive-backed Thrush* is closely allied to the preceding in appearance, and probably in habits and geographical distribution. Mr. Giraud thinks it probable that it breeds farther north than the preceding.

WILSON'S THRUSH.

MERULA WILSONI.

(STATE COLLECTION.)

T. mustelinus. WILSON, Am. Orn. Vol. 5. p. 58, pl. 43, fig. 3.
T. wilsonii. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 76. AUDUBON, folio, pl. 164 Orn. Biog. Vol. 2. p. 164, and Vol. 5, 446.
Veery, or *Wilson's Thrush.* NUTTALL, Manual Orn. Vol. 1, p. 349.
Tawny Thrush. AUDUBON. B. of A. Vol. 3. p. 27, pl. 145 (male).

CHARACTERISTICS. Tawny brown. Beneath white, with brown pointed spots on the throat and upper part of the breast. Tail short, nearly even; its feathers somewhat pointed. Second, third and fourth quills longest. Length, 7 inches.

DESCRIPTION. Bill short and robust; upper mandible gently curved. The tips of the folded wings one inch shorter than the tail. Shafts of the quill and tail-feathers produced somewhat beyond the webs.

COLOR. Bill black above and beneath, except the base of the lower mandible, which is yellow; the sides of the breast, and underneath the wings, slightly tinged with cinereous. It resembles in its general aspect the preceding, but may be distinguished by these marks: The Hermit Thrush has a longer bill, more curved at the tip, and white beneath; its tarsus is more slender and much longer than its middle toe; its breast has a reddish tinge, and its belly, vent, and under tail-coverts nearly pure white.

Length, 6·5—7·5.

Wilson, in describing this new species, assigned to it a name which had been already appropriated to another bird: hence the necessity for a change. It is seen in this State, where it breeds, about the end of April, laying from four to five green unspotted eggs. They have the same habits with the preceding, and range from 25° to 57° north.

(*EXTRA-LIMITAL.*)

M. silens. (Richardson, F. B. A. Vol. 2, p. 186.) Greyish olive; beneath whitish; throat and breast marked with dusky spots; tail and upper coverts tinged with rufous; edges of the quills pale: 2d and 6th subequal. Length, 7 inches. *Mexico, Texas.*

M. nævia. (Id. pl. 38.) Blackish grey; beneath reddish orange, except an imperfect blackish belt over the breast. Wings with two reddish orange bands; outer webs of quills edged with the same. Length, 10 inches. *Columbia river.*

M. nana. (Aud. B. of A. pl. 419.) Resembles *solitaria* in its colors, but inferior in size. Length, six inches. *Columbia river.*

Genus Cinclus, *Bechstein.* Bill rather slender, slightly bent upwards, compressed at the sides; upper mandible notched at the tip, and encompassing the lower one. Nostrils basal, linear, and partly closed by a membrane. Legs strong. Tarsus with a long undivided plate and four lower scutellæ, not as long as the middle toe and claw; the outer toe attached to the middle as far as the second joint. Wings short; the first, second and third quills gradually longer. Tail short, even.

C. americanus. (Bonap. Am. Orn. Vol. 2, p. 173, pl. 16.) Dark cinereous. Head, neck and breast chocolate-brown. Length, 7 inches. *Oregon, Rocky mountains.*

FAMILY MOTACILLIDÆ.

Bill moderately long, straight, slender: bristles at the base small or wanting. Upper mandible slightly notched and bent at the tip. Nostrils basal, elliptical, half closed by a membrane. Form slender. Tongue cartilaginous, slender; the tip slit. Toes subequal; the claw of the hind toe generally long. Wings moderate or long; the scapulars occasionally much elongated. Tail emarginate.

GENUS ANTHUS. Bechstein.

Bill moderate, straight, destitute of bristles; edges somewhat inflected in the middle. Upper mandible carinate at the base, rounded beyond, notched slightly, and a little bent at the tip. Tarsus much compressed, longer than the middle toe; hind toe shortest, with a long and rather straight claw. Outer three quills subequal, longest. Secondaries notched at the tips: one or more of the scapulars (inner secondaries, *Audubon*) nearly as long as the primaries. Tail long, emarginate.

THE AMERICAN TITLARK.

Anthus ludovicianus.

PLATE LXIV. FIG. 99 (Male).

(STATE COLLECTION. Male and female.)

Alauda ludoviciana. Linnæus. Gmelin.
Alauda rufa. Wilson, Am. Orn. Vol. 5, p. 89, pl. 42, fig. 4.
Anthus spinoletta. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 90.
A. aquaticus et *pipiens.* Audubon, folio, pl. 10 and 80; Orn. Biog. Vol. 1, p. 49 (adult); Vol. 1, p. 408 (young); Vol. 5, p. 449.
Brown or *Red Lark.* Nuttall, Man. Orn. Vol. 1, p. 450.
A. aquaticus. Richardson, F. B. A. Vol. 2, p. 231, pl. 44.
American Pipit or *Titlark.* Audubon, B. of A. Vol. 3, p. 40, pl. 150
A. ludovicianus, American Pipit. Giraud, Birds of Long island, p. 94.

Characteristics. Beneath, and line over the eye whitish; breast spotted with black. Tail-feathers dark: outer one half white; the second, and occasionally the third, tipped with white. *Old male*, slightly roseate beneath. *Female*, more spotted below. *Young*, line over the eye, and beneath, reddish yellow. Length, 7 inches.

Description. Hind claw longer than the toe. Color, varies, as we have noticed above, with age and sex. In the male, the upper parts greyish brown, with a darker shade in the centre of each feather. Checks brown: a light colored stripe or band over the eye, more distinct in its summer plumage. Beneath dusky white; the lower part of the neck, the breast and sides of the abdomen with long dusky spots; chin white. In summer, the male has the neck and breast tinged with reddish. *Female*, similar to the male in its winter plumage. *Young*, with more green above; lower mandible yellowish; the spots beneath dark and conspicuous; the two bands on the wings greyish brown, and an obscure band of brownish on the neck.

Length, 6·5 – 7·0.

There appears to have been much diversity of opinion respecting this species, arising from its various states of plumage. It was originally noticed by Gmelin, and subsequently well described by Wilson as the *A. rufa*. Subsequent writers referred it to *spinoletta* and *aquaticus* of Europe. Mr. Audubon described the young as a new species under the name of *pipiens*, which he has since restored to its proper place; but Bonaparte, in his *Geographical and Comparative List*, has chosen to consider it still as a distinct species.

The *Little Brown Titlark* winters in Louisiana, and as far south as Brazil. It reaches us about the beginning of May, and goes north as high as the 63d parallel. It breeds in Vermont and farther north, but I have not ascertained whether it breeds in this State. The eggs are from 4 – 6 in number, deep reddish brown, with spots and streaks of a deeper hue. Its food varies with its locality. Here it frequents in preference rocky shores and the banks of streams, feeding on minute shells, shrimps and aquatic insects. When in meadows or ploughed grounds, they feed on insects and various seeds, and on such occasions are found in small flocks. On its return from the north, it passes through this State in October. Mr. Nuttall states that nearly all the birds which pass south in the autumn are young, the adult or white-breasted bird having as yet not been noticed. It has been observed on the shores of the Pacific at Columbia river.

GENUS SEIURUS. Swainson.

Bill rather short, scarcely depressed at the base. Bristles at the corners of the mouth small, scarcely visible. Upper mandible slightly notched, and bent at the tip. Tarsus with three scutellæ, and a long undivided plate above. Wings moderate: third quill usually longest; the first nearly as long as the third.

THE NEW-YORK WATER THRUSH.

Seiurus noveboracensis.

PLATE XLVII. FIG. 106 (Spring plumage).

(STATE COLLECTION.)

Motacilla noveboracensis, Gm. *Water Thrush*, Wilson, Orn. Vol. 3, p. 66, pl. 23, fig. 5.
Sylvia id. Bonaparte, Ann. Lyc. N. York, Vol. 2, p. 77.
T. aquaticus. Audubon, folio, pl. 19; Vol. 5, p. 284; *ludovicianus*, Orn. Biog. Vol. 1, p. 99.
New-York or *Aquatic Thrush.* Nuttall, Man. Orn. Vol. 1, p. 353.
Aquatic Accentor. Richardson, F. B. A. Vol. 2, p. 229.
S. novæboracensis, Aquatic Wood Wagtail. Audubon, B. of A. Vol. 3, p. 37, pl. 149. Giraud, Birds of Long island, p. 93.

Characteristics. Dark olive; beneath, and line over the eye, yellowish; neck and breast with dark arrow-headed spots. *Female*, slightly paler beneath. Length, 6 inches.

Description. Upper mandible somewhat suddenly narrowed in the middle; tip very slender, and very minutely notched. Second and third quills about equal, scarcely longer than the first. The hind claw not longer than that of the middle toe. Tail nearly even, slightly notched.

Color. Above uniform dark olive brown. A line of white or yellowish white over the eye, occasionally extending along the sides of the neck. Bill dusky brown or black above; flesh-colored beneath. Throat white (in the spring plumage); beneath light sulphur-yellow, with deep brown arrow-headed or oblong spots, which are also seen underneath the wings.

Length, 6·0. Alar extent, 9·5.

This musical little bird, as one of its popular names implies, is partial to the neighborhood of brooks, in search of insects. It builds its nest on the ground, laying 4 – 6 flesh-colored eggs sprinkled with dark red at the larger end. It inhabits Louisiana, and as far south as Brazil. It appears in this State from the south about the beginning of May, and has been noticed as far north as the 64th parallel. It returns south through this State the latter end of August, and appears to be equally fond of swamps and mountainous regions. I have not been able to ascertain whether it breeds in this State.

THE OVEN-BIRD.

SEIURUS AUROCAPILLUS.

PLATE XLVI. FIG. 102.

(STATE COLLECTION.)

T. aurocapillus, LIN. *Golden-crowned Thrush*, PENNANT, Arct. Zool. Vol. 2, p. 339.
T. id. WILSON, Am. Orn. Vol. 2, p. 88, pl. 14, fig. 2.
Sylvia aurocapilla. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 77.
T. id. AUDUBON, folio, pl. 143; Orn. Biog. Vol. 2, p. 253, and Vol. 5, p. 447.
Oven-bird. NUTTALL, Man. Ornith. Vol. 1, p. 355.
Golden-crowned Accentor. RICHARDSON, F. B. A. Vol. 2, p. 227.
Golden-crowned Wagtail. AUDUBON, Birds of Am. Vol. 3, p. 35, pl. 148.
Golden-crowned Wood Wagtail. GIRAUD, Birds of Long Island, p. 92.

CHARACTERISTICS. Yellowish olive. Crown orange, margined on each side with black. Beneath whitish; the breast spotted with dark brown. Length 6 inches.

DESCRIPTION. Bill short, rather robust. Bristles at the angles of the mouth very short. Tail even or slightly emarginate; its feathers acutely pointed, and extending an inch beyond the folded wings; the three first quills subequal.

COLOR. Above yellowish olive; the tips of the wings, and the inner vanes of the quills, dusky brown; the brownish orange spot on the crown bordered on each side by a series of black spots, often continuous. Bill and feet pale. Spots on the breast triangular. *Female*, with a paler crown. *Young:* crown uniform with the rest of the body.

Length, 6·0. Alar extent, 9·0.

This is a common species in our State during the summer. It winters in Mexico; appears in Louisiana about the beginning of March: in this State the latter end of April, and ranges north to the 55th parallel. It breeds in this and the neighboring States, often producing two broods in the season. One of its trivial names is derived from its sinking a curious oven-shaped nest in the ground, where it deposits 4 – 6 white eggs, spotted at the larger end with brown. It is a shy solitary bird, feeding on ants, caterpillars, and small coleopterous insects. It leaves or passes through this State to its winter abode in the early part of September.

FAMILY SYLVICOLIDÆ.

Bill short, moderate, slender, subconical, gradually compressed towards the tip. Upper mandible straight to near the tip, where it is slightly notched. Tongue cartilaginous, tapering to the tip. Tarsus with eight scutellæ; the upper ones blended, compressed, longer than the middle toe. Claws rather small, much compressed. Tail moderate, of twelve feathers.

GENUS TRICHAS. Swainson.

Bill slightly bent. Tarsus longer than the middle toe and claw. Claws moderately long, laterally grooved. Tongue slit and lacerated. Wings short, convex, rounded: the third and fourth quills usually longest; the fifth somewhat shorter. Tail much rounded, uniform in color.

THE YELLOW-THROAT.

Trichas marilandica.

PLATE LIV. FIG. 122.

(STATE COLLECTION.)

Turdus trichas, Linnæus. *Yellow-breasted Warbler*, Pennant, Arct. Zoology, Vol. 2, p. 399.
Sylvia marilandica. Wilson, Am. Ornith. Vol. 1, p. 88, pl. 6, fig. 1 (male); Vol. 2, p. 163, pl. 18, fig. 4 (female).
S. trichas. Bonaparte, Ann. Lyc. Nat. Hist. N. Y. Vol. 2. p. 84.
Sylvia roscoe. Audubon, fol. pl. 23 and 24; Orn. Biog. Vol. 1, p. 124 (young); *trichas*, Id. Vol. 1, p. 121 (adult); Vol. 5, p. 463.
Maryland Yellow-throat. Nuttall, Man. Orn. Vol. 1, p. 401, figure.
Trichas marilandica. Audubon, B. of A. Vol. 2, p. 78, pl. 102 (male, female and young).
Maryland Ground Warbler. Giraud, Birds of Long Island, p. 64.

Characteristics. Olive-green; front, and stripe through the eye, black, bordered above by grey. *Female*, dull olive; no black stripe; beneath reddish brown. *Young male*, the stripe only extending to the eye. Length 5 inches.

Description. First quill longest. Color. A rich olive-green above. A broad black band over the front, and passing through the eyes, terminates in a point on the sides of the neck, bounded above by a bluish grey line. Throat, breast and vent yellow; darker on the belly and flanks; more distinct on the chin, throat and breast. Bill dark brown. Feet flesh-colored. Wings and tail dusky brown; their feathers edged with yellowish olive. *Female:* Above light olive; beneath reddish brown: the eye stripe wanting. *Autumnal male:* Stripe only passing through the eye, and not bordered. Summit of the head reddish olive.

Length, 5·0–5·3. Alar extent, 6·0–6·5.

The *Yellow-throat* is a common species in this State, where it is found from May to September. It builds a nest in the ground somewhat like the Oven-bird, laying from four to six white eggs speckled with reddish brown. It feeds chiefly on caterpillars and spiders. It ranges from Mexico to the 50th degree of north latitude.

THE MOURNING WARBLER.

TRICHAS PHILADELPHIA.

PLATE LIV. FIG. 122 (ADULT).

(STATE COLLECTION.)

Sylvia philadelphia. WILSON, Am. Orn. Vol. 2, p. 101, pl. 11, fig. 6 (adult male); *agilis*, ID. Vol. 5, p. 64, pl. 39, fig. 4 (young).
S. agilis et *philadelphia.* BONAPARTE, Ann. Lyc. N. Y. Vol. 2, pp. 84 and 85.
S. agilis. AUDUBON, fol. pl. 133 (young); Orn. Biog. Vol. 2, p. 227; *philadelphia*, pl. 399; Orn. Biog. Vol. 5, p. 79.
S. agilis et *philadelphia.* NUTTALL, Manual, Vol. 1, pp. 399 and 404.
Trichas philadelphia. AUDUBON, B. of A. Vol. 2, p. 76, pl. 101 (male). *Sylvicola agilis*, ID. Vol. 3, p. 71, pl. 99.
Mourning Ground Warbler. GIRAUD, Birds of Long island, p. 65.

CHARACTERISTICS. Deep greenish olive. Head slate; breast bluish slate, with numerous crescent-shaped black bars; beneath yellow. *Female* and *young:* Uniform greenish olive; throat, sides of the neck and breast buff. Length, 5 inches.

DESCRIPTION. Tips of the wings, and centre of the tail-feathers, brownish. Head and back part of the neck blue-grey; space before the eye, and on the frontlet, black; chin and sides of the neck blue-grey. Central part of the throat and breast black, with numerous concentric paler lines. In an individual in the Cabinet of the Lyceum, the breast is of a uniform jet black, and only faint traces of the concentric or crescent-shaped lines are to be seen: from this I am induced to suspect that Wilson's specimen was in change, and that in the old male this part is of a uniform black color. *Female* and *young:* Throat of a pure buff; breast buff, with a darker shade. Tail-feathers rather more acute than in the adult. The figure given by Wilson of *agilis*, would scarcely be understood without his description.

Length, 5·0 – 5·5. Alar extent, 7·0 – 8·0.

Our great ornithologist first described the male of this species under the name of *philadelphia*. He never met with but this single specimen, and Charles Bonaparte at one time supposed it to be a variety of the preceding. Another specimen has since been added to the Collection of the Lyceum of Natural History of New-York, from Rockland county, and Mr. Bell obtained another from Long island. Dr. Bachman informs me that he has not the slightest doubt that *agilis* was the female and young of this species; and from a careful comparison of the specimens within my reach, I have arrived at the same conclusion. Charles Bonaparte, in the prodromus of the general system of ornithology which he intends to publish, also accords with these views. Mr. Audubon, however, in his latest work cited above, separates the species.

The *Mourning Warbler* derives its name from its peculiarly melancholy notes, and is a bird of shy and solitary habits. It is a rare species, and its history is imperfect. Its present ascertained geographical range is between the 23d and 44th parallels of latitude.

(*EXTRA-LIMITAL.*)

T. tolmæi. (Townsend, Ac. Sc. Vol. 8, p. 149. Audubon, B. of A. Vol. 2, p. 74, pl. 100.) Olive. Head, neck and breast dark sooty ash. Lores and frontlet black. *Columbia River.*

T. delafieldi. (Aud. B. of A. Vol. 2, p. 81, pl. 103.) Crown bluish ash; frontlet and line through the eye black. Beneath entirely yellow. Length, 5 inches. *California.*

GENUS VERMIVORA. Swainson.

Bill short, rounded, about as long as the head, thick at the base, acutely pointed, straight, entire. Nostrils elliptical. Bristles scarcely apparent. Tail moderate, nearly even.

Obs. This genus corresponds nearly to the *Dacnis* of authors, and entirely with the genus *Helinaia* subsequently proposed by Audubon.

THE WORM-EATING WARBLER.

Vermivora pennsylvanica.

PLATE LV. FIG. 121.

(CABINET OF THE LYCEUM.)

Motacilla vermivora, Gm. *Worm-eater*, Pennant, Arct. Zool. Vol. 2, p. 406.
Sylvia vermivora. Wilson, Am. Orn. Vol. 3, p. 74, pl. 24, fig. 4. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 86. Audubon, folio, pl. 34; Orn. Biog. Vol. 1, p. 177, and Vol. 5, p. 460.
Worm-eating Warbler. Nuttall, Man. Orn. Vol. 1, p. 409.
V. pensylvanica. Swainson.
Helinaia vermivora. Audubon, Birds of Am. Vol. 2, p. 86, pl. 105.
H. id., Worm-eating Swamp Warbler. Giraud, Birds of Long island, p. 67.

Characteristics. Olive; beneath dull buff. Head striped above with black and buff. Length, 5·5.

Description. Second quill slightly longest. Tail even, slightly emarginate. Tarsus longer than the middle toe. Nostrils partly concealed by the feathers.

Color. Above deep olive green. Head and beneath buff; the head with two stripes of black or umber brown on the crown, extending to the back of the neck; and externally to these, two narrower and shorter stripes through the eyes. Abdomen and under tail-coverts pale.

Length, 5·0 – 5·5. Alar extent, 8·0 – 8·5.

This species feeds on spiders and other insects infesting trees. It lays 4 – 5 light buff-colored eggs with a few reddish spots at the larger end. It is numerous in New-Jersey, but has not been noticed as abundant in this State. It occurs here between May and September, and ranges between the 23d and 55th parallels.

THE WHISTLING WARBLER.

Vermivora swainsoni.

Sylvia swainsonii. Audubon, folio, pl. 198; Orn. Biog. Vol. 2, p. 563, and Vol. 5, p. 462.
Vermivora id. Bonaparte, Geog. and Comp. List, p. 21.
Helinaia id. Audubon, Birds of Am. Vol. 3, p. 83, pl. 104 (male).

Characteristics. Brown, tinged with reddish on the head. Sides of the head brownish white, and a whitish line over the eye. Length, 5 inches.

Description. Nostrils half closed by a cartilaginous membrane. Claws with lateral grooves. The first three quills longest, subequal.

Color. Bill brownish, becoming darker at the tip. Feet flesh-colored. Above uniform brown. Beneath pale brownish grey; darker on the sides. Head tinged with red on the summit; brownish white on its cheeks, and a light colored line passes over the eye.

Length, 5·5. Alar extent, 8·5.

This is a southern species, and apparently rare. I have never seen it in this State, but my young friend H. C. De Rham assured me that he had obtained it from Rockland county. His premature and much regretted decease prevented me from examining the specimen. It has since been observed in Massachusetts, by Mr. Samuel Cabot. The female does not appear to have been described. Its history is still imperfect.

THE BLUE-WINGED WARBLER.

Vermivora solitaria.

PLATE LV. FIG. 125 (Male).

(STATE COLLECTION.)

Pine Warbler. Pennant, Arct. Zool. Vol. 2, p. 412. *Parus aureus*, Bartram, p. 292.
Sylvia solitaria. Wilson, Am. Orn. Vol. 2, p. 109, pl. 15, fig. 4. Bonaparte, Ann. Lyc. Vol. 2, p. 87. Aud. folio, pl. 20; Orn. Biog. Vol. 1, p. 102.
Blue-winged Yellow Warbler. Nuttall, Man. Orn. Vol. 1, p. 410.
Helinaia solitaria. Audubon, Birds of Am. Vol. 2, p. 98, pl. 111.
H. id., Blue-winged Yellow Swamp Warbler. Giraud, Birds of Long island, p. 66.

Characteristics. Olive-green. Forehead and all beneath yellow. Lores black. Wings and tail slate-blue: the former bifasciate with whitish; the latter with the inner vanes white. *Young:* crown olive-green. Length, 5 inches.

Description. Second quill longest. Tail slightly emarginate in repose; its feathers 0·7 longer than the tips of the wings, and pointed.

Color. Above bright olive green. Summit of the head and beneath bright yellow: lores black. Wings and tail slate-blue. Two bands of white across the wing; the tail-feathers, except the central ones, white on the inner webs. *Young:* Faint bluish on the cheeks.

Rump, tail-coverts, wing-coverts and outer webs of the primaries blue. Head greenish-olive, passing into bluish on the back of the neck. Interscapulary region tawny orange. Beneath, chin lemon-yellow; throat bluish; breast reddish orange, with light reddish drab on the sides; belly and vent soiled white.

Length, 5·0 – 5·5. Alar extent, 7·0 – 7·5.

I have never had the fortune to meet with more than two of this rare and beautiful species. It probably breeds within this State, as I found the young in the neighborhood of my residence in August. It lays 4 – 6 white eggs with a few pale reddish spots at the larger end. Its geographical range, as far as has been yet traced, is from Mexico to New-York, which appears to be its extreme northern limit.

THE GOLDEN-WINGED WARBLER.

VERMIVORA CHRYSOPTERA.

PLATE LII. FIG. 118 (MALE).

(STATE COLLECTION. CABINET LYCEUM.)

Motacilla chrysoptera. L. 12 ed. p. 333. PENNANT, Arct. Zool. Vol 2, p. 403, and p. 404.
Sylvia id. WILSON, Am. Orn. Vol. 2, p. 113, pl. 15, fig. 5. BONAPARTE, Ann. Lyc. Vol. 2, p. 87; Am. Orn. Vol. 2, p. 12, pl. 1, fig. 3 (female). AUDUBON, folio, pl. 414; Orn. Biog. Vol. 5. p. 151.
Golden-winged Warbler. NUTTALL, Man. Orn. Vol. 1, p. 411.
Golden-winged Swamp Warbler. AUDUBON, Birds of Am. Vol. 2, p. 91, pl. 107 (male and female).
Helinaia chrysoptera. GIRAUD, Birds of Long island, p. 68.

CHARACTERISTICS. Bluish grey. Crown and wing-coverts yellow. Chin, throat and eye-stripe black; beneath white. *Female:* Olive; breast and eye-stripe dusky. Length, 4½ inches.

DESCRIPTION. Bill slightly shorter than the head. First and second quills longest, subequal. Tail 1·7 long, slightly emarginate; its feathers acuminate, and 1·1 longer than the tips of the wings.

COLOR. Above bluish grey, obscurely touched with greenish. The yellow crown separated from the black eye-stripe by a band of white over the eye. The black throat bounded by white on the sides of the neck. Flanks pale ash. Outer webs of the primaries whitish, and of the secondaries bright green. Upper mandible black; lower horn-color. The three external tail-feathers on each side with their inner vanes white. *Female:* Eye-stripe ash-colored; throat pale slate: two bright yellow bands across the wings. Quills as in the male, broadly margined with white on their inner vanes.

Length, 4·5 – 5·0. Alar extent, 7·0.

The *Golden-winged Warbler* is a rare species in this State, although it has been observed as far as 50° north. It winters in Mexico and the southern States. The specimen which furnished the illustration was shot in Kings county, in the early part of May. Its history is yet incomplete.

THE TENNESSEE WARBLER.

VERMIVORA PEREGRINA.

PLATE XLVII. FIG. 105 (FEMALE).

(STATE COLLECTION.)

Sylvia peregrina. WILSON, Am. Orn. Vol. 3, p. 97, pl. 25, fig. 2 (male). BONAPARTE, Ann. Lyc. Vol. 2, p. 87. NUTTALL, Man. Orn. Vol. 1, p. 412. AUDUBON, folio, pl. 151 (male); Orn. Biog. Vol. 2, p. 412.
S. (Vermivora) peregrina. RICHARDSON, F. B. A. Vol. 2, p. 221, pl. 42 (male).
Helinaia id. AUDUBON, Birds of Am. Vol. 2, p. 96, pl. 110 (male).

CHARACTERISTICS. Yellowish; bluish on the head; line over the eye pale yellow. Bill very short. Beneath whitish. Wings without bands. *Female:* Chin, throat and line over the eye cream-color. Length, $4\frac{1}{2}$ inches.

DESCRIPTION. Bill straight and notched near the tip. The three first quills subequal; the second slightly longest. Tail slightly emarginate, even, 1·8 longer than the wings, and its feathers acuminate.

COLOR. *Female:* Summit of the head ashy blue, blending on the back of the neck into the olive of the back. Interscapulars and upper tail-coverts rich yellow olive. Outer webs of the first six quills soiled white; the remainder and secondaries margined with green. Frontlet and line over the eye cream-white. Eye-stripe slate colored. Chin and upper part of the throat buff. All beneath dusky white, slightly tinged with yellow.

Length, 4·7. Alar extent, 8·0.

This is a rare species in this State, and indeed is rare everywhere. It ranges between 23° and 55° north. The female has not, until now, been described or figured. The specimen which afforded the above description was shot in Putnam county, September 5, which must be near the time of its southern migration. The history of its migration and breeding is yet unknown.

THE NASHVILLE WARBLER.

VERMIVORA RUBRICAPILLA.

PLATE XLVII. FIG. 104 (MALE).

(STATE COLLECTION.)

Sylvia ruficapilla et *rubricapilla*. WILSON, Am. Orn. Vol. 3, p. 120, pl. 27, fig. 3. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 87. NUTTALL, Man. Orn. Vol. 1, p. 412.
Nashville Warbler. AUDUBON, fol. pl. 89; Orn. Biog. Vol. 1, p. 450.
Sylvicola (Vermivora) rubricapilla. RICHARDSON, F. B. A. Vol. 2, p. 220, pl. 42 (male).
Helmaia id. AUDUBON, B. of A. Vol. 2, p. 103, pl. 113 (male and female).
H. id., Nashville Warbler. GIRAUD, Birds of Long Island, p. 69.

CHARACTERISTICS. Greenish olive; beneath yellow. Head and neck light ash. Crown dotted with dull reddish. Wings without bands. *Female:* Head dull olive; chin buff. Length, 4½ inches.

DESCRIPTION. Second quill-feather longest; the first shorter than the third. Tail slightly emarginate, 0·7 longer than the tips of the closed wings.

COLOR. Head and sides of the neck ashen. On the summit of the head, a few chesnut-colored spots, produced by feathers of that color at their bases, tipped with ash, and nearly concealing the bay crown: occasionally the whole crown of a uniform bay. Circle round the eye white. Outer web of the first primary white, or tinged with yellow; the others light greenish olive. Wings and tail brown; the latter margined with olive on the outer webs. All beneath, with the exception of the centre of the body, bright yellow. *Female:* The chesnut marks on the crown scarcely distinguishable, and all the colors more dull. Head olive-brownish; sides of the neck brownish buff. Chin bright buff. Tail-feathers more acuminated than in the male.

Length, 4·5. Alar extent, 7·0.

This is another rather rare species. Those in the State Collection were shot in Rockland county, September 10. The specimen figured by Richardson appears to be a strongly marked variety of this species. It arrives in this State about the middle of May, and breeds farther north. Its geographical limits are between the 23d and 55th parallels of north latitude, but it appears to be exceedingly rare. History imperfect.

THE ORANGE-CROWNED WARBLER.

VERMIVORA CELATA.

Sylvia celata. SAY, Long's Expedition, Vol. 1, p. 169. BONAPARTE, Ann. Lyc. Vol. 2, p. 88; Am. Orn. Vol. 1, p. 45, pl. 5, fig. 2. AUDUBON, fol. pl. 178; Orn. Biog. Vol. 2, p. 419.
Orange-crowned Warbler. NUTTALL, Man. Orn. Vol. 1, p. 413. AUDUBON, B. of A. Vol. 2, p. 100, pl. 112 (male and female).

CHARACTERISTICS. Greenish olive; beneath olivaceous yellow. Crown with a bay spot. Length, 5¼ inches.

DESCRIPTION. Second and third quills longest, subequal. Tail slightly emarginate, of twelve feathers. Colors exceedingly simple. Bill dusky above; pale greyish blue beneath. Above brownish grey; beneath dull olive-yellow, becoming more bright on the vent and lower tail-feathers.

Length, 5·5. Alar extent, 8·0.

I have not been able to find this species within our limits; but as it breeds in Maine, and ranges from 24° to 54° north, it undoubtedly belongs here. Eggs 4–6, of a pale green color, with small black dots. In the autumn, its bright bay crown can only be seen by separating the feathers. This species, which appears to be more abundant in the Southern States, was first discovered by the late Mr. Say on the banks of the Missouri.

(*EXTRA-LIMITAL.*)

V. protonotarius. (AUD. B. of A. Vol. 2, pl. 106.) Yellow. Wings, rump and tail-feathers greyish blue. Inner webs of the tail-feathers white, except near the tips. Length, 5½ inches. *Southern* and *Western States.*

V. bachmani. (ID. Ib. pl. 108.) Brownish olive. Forehead, line over eyes, cheeks, side of neck and beneath yellow: a black patch on the breast. *Female:* frontlet olive-green. Length, 4½ inches.

V. carbonata. (ID. pl. 109.) Dark olive green: beneath yellow. Forehead and crown black; back and sides of the body spotted with black.

V. nigrescens. (ID. pl. 114.) Bluish grey. Head, eye-stripe and breast black: a small yellow dash from above the eye to the nostril. Cheeks, and two bands across the wings, white. Length, 5 inches. *Columbia river.*

GENUS SYLVICOLA. Swainson.

Bill short, straight, with feeble bristles at the base. Upper mandible slightly curved, and notched near the tip. Nostrils basal, partially concealed by the feathers. Tarsus compressed, longer than the middle toe, with seven scutellæ. Tail emarginate. First, second or third quills longest, subequal.

THE MYRTLE-BIRD.

Sylvicola coronata.

PLATE LXVI. FIG. 103.

(STATE COLLECTION.)

Motacilla coronata. Linnæus, p. 333.
Yellow-rump Warbler. Pennant, Arct. Zool. Vol. 2, p. 400, and p. 403.
Sylvia coronata. Wilson, Orn. Vol. 2, p. 138, pl. 17, fig. 4 (summer dress); Vol. 5, p. 121, pl. 45, fig. 3 (winter dress).
S. id. Audubon, fol. pl. 153; Orn. Biog. Vol. 2, p. 303.
Myrtle-bird. Nuttall, Man. Orn. Vol. 1, p. 361.
Sylvicola coronata. Richardson, F. B. A. Vol. 2, p. 216. Audubon, B. of Am. Vol 2, p. 23, pl. 76 (male and young).
S. id., Yellow-crowned Wood-warbler. Giraud, Birds of Long Island, p. 55.

Characteristics. Slate-colored, streaked with black; beneath whitish. Crown, sides of the breast and rump yellow. Wings bifasciate with white. Inner webs of three outer tail-feathers white. *Winter*, brownish olive; yellow of breast and crown obsolete. *Young*, without black, and the yellow scarcely obvious. Length, 5 inches.

Description. Bill rather broad at base, and half an inch long. Second quill longest. Wings an inch shorter than the tail, which is emarginate; the central feathers being somewhat more acuminated.

Color. Above slate, with a dark streak in the middle of each feather. Front and sides of the head black. Wings and tail bright brown; the former bifasciate with white. On the summit of the head, a bright yellow crown. Eye-stripe black, dilated occasionally behind, with a whitish line over the eye, which is often obsolete. Rump yellow. Beneath, the throat white, immaculate; belly and vent white, striped with black: sides of the breast yellow. Bill and legs blackish brown. *Female*, light brown above, with dark reddish brown interrupted stripes on the back: the yellow on the crown nearly concealed by the brown obsoletely striped feathers. Traces of yellow on the sides of the breast. Eye-stripe dull brown. *Autumnal male*, resembles the female: the yellow on the sides of the breast not so brilliant. Whitish line over the eye, bordered above by a darker one. No yellow on the crown.

Length, 5·0 – 6·0. Alar extent, 8·5 – 9·0.

The *Yellow-crowned* or *Yellow-rump Warbler*, or *Myrtle-bird*, ranges from Mexico to the 65th degree of north latitude. It is a common species, and reaches us about the beginning of May, on its way to the north, where it breeds. On its return, it leaves us in November, and some are even seen as late as the early part of December. In summer, it feeds on caterpillars and insects which it takes on the wing; in the autumn and winter, on berries of the Juniper, and particularly the Myrtle-wax berries (*Myrica cerifera*), which has given rise to one of its popular names. Eggs 4 – 5, flesh-colored, sparsely dotted with red in a ring around the larger end. Extremely common in this State.

THE RED-POLL WARBLER.

SYLVICOLA RUFICAPILLA.

PLATE LVIII. FIG. 133 (ADULT MALE).

(STATE COLLECTION.)

Sylvia ruficapilla, LATHAM. *Red-poll Warbler*, PENNANT, Arct. Zool. Vol. 2, p. 401.
S. petechia. WILSON, Am. Orn. Vol. 4, p. 19, pl. 28, fig. 4 (adult).
S. palmarum. BONAPARTE, Am. Ornith. Vol. 2, p. 12, pl. 10, fig. 2 (young).
S. petechia. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 83; and *palmarum*, p. 78.
S. palmarum. AUDUBON, fol. pl. 163 (adult); *petechia*, pl. 145 (young); Ornith. Biog. Vol. 2, pp. 259 and 360.
Yellow Red-poll Warbler. NUTTALL, Man. Orn. Vol. 1, p. 364.
Sylvicola petechia. RICHARDSON, F. B. A. Vol. 2, p. 215, pl. 41.
S. petechia. AUDUBON, B. of A. Vol. 2, p. 55, pl. 90 (males and young).
Yellow Red-poll Warbler. GIRAUD, Birds of Long Island, p. 59.

CHARACTERISTICS. Brownish. Crown rufous; line over the eye, and all beneath yellow lateral tail-feathers tipped with white. Crown and streaks on the breast bright bay. *Female*, without the rufous crown. *Young*, yellowish grey beneath. Length, 4½ inches.

DESCRIPTION. Upper mandible carinate, and distinctly notched. Second quill longest, but subequal with the first and third. Tail emarginate, but, when expanded, somewhat rounded, an inch longer than the tips of the closed wings.

COLOR. Above yellowish olive. Crown dark bay. Rump yellow, tinged with green. The two lateral tail-feathers with a large dash of white on the inner web, embracing the tip. Deep bay streaks on the yellow breast. Over the eye, a bright yellow streak; an obscure reddish line passing through the eye. *Female*, without the bright rufous crown, and the spots on the breast not so distinct. *Young of the year:* Crown spotted with bay; the breast yellowish brown, obscurely streaked with deeper brown.

Length, 4·5 – 5·0. Alar extent, 8·0 – 9·0.

There has been great confusion in relation to this species, and more extended observations are still requisite to render its history complete. The specimen in the State Collection was shot, September 20, in the neighborhood of New-York. Although very abundant in the Southern States from November to April, it has seldom been noticed in this State, where it appears to be shy and solitary. Its breeding places and periods of migration are yet unknown. It has been observed from Mexico to the 55th degree of north latitude.

THE SPOTTED WARBLER.

SYLVICOLA MACULOSA.

PLATE L FIG. 112 (MALE).

(STATE COLLECTION.)

Motacilla maculosa, GMELIN. *S. id.* VIEILLOT, pl. 93.
Sylvia magnolia. WILSON, Am. Orn. Vol. 3, p. 63, pl. 23, fig. 2.
Black and *Yellow Warbler.* AUDUBON, fol. pl. 123 (adult), pl. 50 (young); Orn. Biog. Vol. 1, p. 360, where it is named *swainsoni*; Vol. 2, p. 145, and Vol. 5, p. 438.
Spotted Warbler. NUTTALL, Man. Orn. Vol. I, p. 370.
Yellow-rump Warbler. RICHARDSON, F. B. A. Vol. 2, p. 212, pl. 40.
Black and *Yellow Wood Warbler.* AUDUBON, B. of A. Vol. 2, p. 65, pl. 96.
Blue-headed Yellow-rumped Wood-warbler. GIRAUD, Birds of Long island, p. 54.

CHARACTERISTICS. Crown ashen. Rump and beneath yellow. Breast with oblong black spots. Lateral tail-feathers white on the middle of the inner vanes. *Young*, without the black eye-stripe. Length, 4½ inches.

DESCRIPTION. Lower mandible straight, with a few bristles at the base. Second quill slightly longest, but the first three subequal; the fourth longer than the first. Tail slightly emarginate, rounded, 1·5 longer than the tips of the closed wings.

COLOR. Upper part of the head and neck slate-blue. Frontlet and stripe passing through the eye and dilated behind, black: a narrow line over the eye, running backwards, white. Back and upper tail-coverts deep black; the edges of the feathers greenish yellow. Rump and beneath yellow. Chin immaculate. Throat and breast with confluent oblong black spots, forming a sort of collar around the breast; sides of the breast with similar oblong black spots. Vent, middle of the inner webs of all the tail-feathers except the central pair, and under tail-coverts, white. *Young*, I have not seen, but according to Audubon it is yellowish grey above, with very faint streaks on the sides.

Length, 4·5 – 5·0. Alar extent, 7·5.

This is one of the most beautiful, and occasionally in this State the rarest, of our warblers; at other times it is more common. According to Vigors, it is common in Cuba, and also in Maine and Labrador as far as 55° north, where it breeds; but in the intermediate regions it has been rarely observed. It is rare in the Southern and Western States, but Mr. Audubon notices having observed them on the Pocano mountains (Pennsylvania) in the autumn, with their young. It feeds on winged insects. It lays 4 – 5 small white eggs, sprinkled with red at the larger end. In the northern regions, it is called by the natives the *Rain-bird*. The complete history of its migration is yet a desideratum.

THE SPOTTED CANADA WARBLER.

SYLVICOLA PARDALINA.

PLATE LI. FIG. 115 (FEMALE.)

(STATE COLLECTION.)

Motacilla canadensis. LINNÆUS, Syst. Nat. sp. 27. PENNANT, Arct. Zool. Vol. 2. p. 383.
Muscicapa id. WILSON, Am. Orn. Vol. 3, p. 100, pl. 26, fig. 2 (male).
Sylvia pardalina. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 79.
Muscicapa canadensis. AUDUBON, fol. pl. 90; Orn. Biog. Vol. 2, p. 17.
S. pardalina, Canada Warbler. NUTTALL, Man. Orn. Vol. 1, p. 372.
Myiodioctes canadensis. AUDUBON, B. of A. Vol. 2, p. 14, pl. 72 (male and female).
M. id., Spotted Canadian Fly-catching Warbler. GIRAUD, Birds of Long island, p. 49.

CHARACTERISTICS. Bluish ash, immaculate. Crown streaked with black. Beneath and lores yellow. Breast with a sort of collar of black spots. Length, $5\frac{1}{2}$ inches.

DESCRIPTION. Bill broad at base, distinctly notched and carinate; 4 – 5 bristles at the base, extending beyond the nostrils. The second and third primaries subequal; the third slightly longest. Tail emarginate, rounded, nearly two inches long, and 1·3 longer than the tips of the folded wings.

COLOR. Above, a uniform bluish ash. Wings and tail brown, edged with greyish. Crown with oblong dark streaks; line under the eye black. Frontlet, line towards the eye yellow. Under tail-coverts white. All beneath bright lemon-yellow. A number of irregular black streaks on the sides of the neck, and over the upper part of the breast, forming a sort of collar. *Female*, with a tinge of green on the back; the streaks on the head scarcely conspicuous: a dark brown dash occasionally beneath the eye. The lemon-color beneath as bright as in the male, but the spots are dull brown and somewhat smaller.

Length, 4·0 – 5·0. Alar extent, 8·5 – 9·0.

This species is occasionally very rare in New-York, or at least in its southern portions, where our specimens were obtained in the early part of May. In the size of its bill, and the bristles at its base, it differs so much from its congeners as scarcely to satisfy me with its present position. Audubon states that he never met with this bird south of Philadelphia, and that it must be a northern species; but Vigors observed it in Cuba. It has been observed as high as 55° north, unless Richardson has confounded it with another species. Its history is yet incomplete.

THE BLUE-GREY WARBLER.

SYLVICOLA CÆRULEA.

PLATE XLVIII. FIG. 107.

Sylvia cærulea. WILSON, Am. Orn. Vol. 2, p. 141, pl. 17, fig. 5 (male); and *S. rara*, Vol. 3, p. 119, pl. 27, fig. 2 (young).

S. rara et *azurea.* BONAPARTE, Ann. Lyc. N. Y. Vol. 2, pp. 82 and 85. Id. Am. Ornith. Vol. 2, p. 27, pl. 11, fig. 2 (female).

Muscicapa cærulea. AUDUBON, folio, pl. 48 (adult). *S. rara*, pl. 49, (young); Orn. Biog. Vol. 1, pp. 255 and 258, and Vol. 5, p. 456.

Sylvicola cærulea. BONAPARTE, Comp. List, p. 23. AUDUBON, B. of A. Vol. 2, p. 45; pl. 86 (males).

CHARACTERISTICS. Blue. Wings bifasciate with white. Tail with a white spot on the inner webs near the tip. Length, $4\frac{1}{2}$ inches.

DESCRIPTION. Three outer quills subequal; the first and second longest. Tail slightly emarginate.

COLOR. Above light verditer-blue, with a few dark streaks on the back. Frontlet and lores black, extending to behind the eyes: a light streak over the eyes. Primaries black, margined with pale blue. Beneath white, with an obscure collar of dusky streaks over the breast. *Female*, the blue above tinged with green. Stripe over the eye and all beneath yellowish white; the white on the tail obscure.

Length, 4·5. Alar extent, 8·0.

This little bird is exceedingly rare in the middle States, and I have never seen it in New-York. As it has been observed near Philadelphia and in Nova-Scotia, it will doubtless be found here, although it seems rather to prefer the eastern parts of the continent. It reaches Louisiana from Mexico in the spring, and breeds there, returning in October.

THE BLACKBURNIAN WARBLER.

SYLVICOLA BLACKBURNIÆ.

PLATE L. FIG. 113 (MALE).

(STATE COLLECTION.)

Motacilla blackburniæ, GM. *S. id.* LATHAM.
Blackburnian Warbler. PENNANT, Arct. Zool. Vol. 2, p. 412 (male).
S. id. WILSON, Am. Ornith. Vol. 3, p. 64, pl. 23, fig. 3 (male). AUDUBON, folio, pl. 135; Orn. Biog. Vol. 2, p. 208, and Vol. 5, p. 73.
Blackburnian Warbler. NUTTALL, Man. Orn. Vol. 1, p. 379. AUDUBON, Birds of Am. Vol. 2, p. 48, pl. 87 (male and female.)
S. id., Blackburnian Wood-warbler. GIRAUD, Birds of Long island, p. 53.

CHARACTERISTICS. Head black, striped with orange: throat and breast orange; white on the wings and lateral tail-feathers. *Female*, dusky olive on the head; line over the eye, and sides of the neck yellowish. Length, $4\frac{1}{2}$ inches.

DESCRIPTION. Bill depressed at base; bristles extending beyond the nostrils, which are large. Tail emarginate, with acuminated feathers. First primary longest.

COLOR. Deep brown above, striated with buff. Head black, with a central stripe of orange. Sides of the head, line over the eye, neck and breast rich orange. Eye-stripe, which is irregularly dilated on the sides of the neck, black. Beneath yellow, striped on the sides with brown. Wings and tail deep brown: wings with a white bar over the coverts. Inner webs of the three lateral tail-feathers more or less white. *Female:* Head dusky olive, rather lighter in the centre; back olive, streaked with brown; eye-stripe brown: two white bars across the wings. Beneath cream-yellow.

Length, 4·5 – 5·0. Alar extent, 7·0 – 8·0.

This beautiful Warbler was first discovered by an English collector named Ashton Blackburn, who resided for many years at Hempstead, Queens county.* The male in the State Collection was killed in this vicinity, May 1, and the female in Putnam county in August; from which I infer that it breeds in this State. This is now rendered certain, from the observations of Dr. Bachman. The eggs are white, with a few spots of light red at the larger end. It ranges from Mexico to the parallel of 54° north.

* Pennant acknowledges his obligations to the collections made by this indefatigable naturalist, in New-York, New-Jersey and Connecticut, at that time in the possession of his sister Anna Blackburn of London. According to Pennant, "he added to the skill and zeal of a sportsman, the most pertinent remarks on the specimens he collected for his worthy and philosophic sister."

THE BAY-BREASTED WARBLER.

SYLVICOLA CASTANEA.

PLATE LI. FIG. 116 (MALE).

(STATE COLLECTION.)

Sylvia castanea. WILSON, Am. Orn. Vol. 2, p. 97, pl. 14, fig. 4 (male). BONAP. Ann. Lyc. N. Y. Vol. 2, p. 80.
Bay-breasted Warbler. AUDUBON, folio, pl. 69; Orn. Biog. Vol. 1, p. 358 NUTTALL, Man. Orn. Vol. 1, p. 382. AUDUBON, Birds of Am. Vol. 2, p. 34, pl. 80 (male and female).
Bay-breasted Wood-warbler. GIRAUD, Birds of Long island, p. 62.

CHARACTERISTICS. Forchead and cheeks black. Crown, throat and sides under the wings bay. Three lateral tail-feathers marked with white. *Female* and *young*, slightly rufous beneath. Length, 5 inches.

DESCRIPTION. Numerous porrect bristles extending beyond thc nostrils: the notch on thc mandible obvious. First three quills subequal; the second slightly longest; outer vanes of the second, third and fourth sinuated. Wings 0·6 shorter than the tail, which is emarginate.

COLOR. Above slate streaked with black. Wings blackish brown, with two white bars. Centre of the breast and vent rufous white. Summit of the head, throat and sides chesnut: a yellowish whitc or buff spot on the sides of the neck. *Female*, faint reddish on the crown, greenish brown in front, and the eyc-spot of the same color. Beneath dusky white, with a faint tinge of bay on the sides.

Length, 5·3. Alar extent, 11·0.

This little Warbler is usually rare in this State. The specimens in the Collection were shot, May 20, in this neighborhood. It has been observed in Massachusetts, which appears to be its highest northern rangc along the Atlantic coast. Audubon has noticed them in Louisiana, but the history of its migration and of its incubation is yet unknown.

THE BLACK-POLL WARBLER.

SYLVICOLA STRIATA.

(STATE COLLECTION.)

Sylvia striata. WILSON, Am. Ornith. Vol. 4, p. 40, pl. 30, fig. 3. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 85. AUDUBON, folio, pl. 133; Orn. Biog. Vol. 2, p. 200.
Sylvicola id. RICHARDSON, F. B. A. Vol. 2, p. 219.
Black-poll Wood-warbler. AUDUBON, Birds of Am. Vol. 2, p. 28, pl. 78 (male and female).
S. striata. GIRAUD, Birds of Long island, p. 53.

CHARACTERISTICS. Bluish grey above. Crown black; cheeks and beneath white. Wings bifasciate with white. Inner vanes of three outer tail-feathers marked with white. *Female*, greenish olive, streaked with black and grey. Length, 5 – 6 inches.

DESCRIPTION. First primary longest. Notch in the bill scarcely perceptible. Tail emarginate, half an inch longer than the tips of the closed wings.

COLOR. Head black, often streaked with brown. Back dark ash, with central black streaks in the feathers. Cheeks white, running backwards and encircling the neck behind, and forming a species of collar more or less distinct. Primaries brown, edged with yellowish olive on the outer webs. Tail wood-brown. Centre of the throat, breast and belly white; the sides striped with black. *Female*, above greenish olive; bands on the wings yellowish.

Length, 5·5 – 6·0. Alar extent, 8·5 – 9·0.

I have observed the *Black-poll* or *Black-headed Warbler* in the neighborhood of New-York, in the beginning of May. According to Mr. Giraud, it is the last of its tribe which reaches us in the spring. It is one of our most common species, and is highly useful in destroying canker-worms and other noxious insects. Its southern limits are not known. It appears in Louisiana in February, is found in New-York in May, and in the middle of July is seen breeding in Labrador. The history of its incubation and migration is yet imperfect. The only author who has seen the eggs, neglected to describe them. This species has been seen as high as 54° north. With its western geographical limits, I am unacquainted.

THE PRAIRIE WARBLER.

SYLVICOLA DISCOLOR.

PLATE XLIX. FIG. 110.

(STATE COLLECTION.)

S. discolor. VIEILLOT, pl. 93.
S. minuta. WILSON, Am. Orn. Vol. 3, p. 87, pl. 25, fig. 4. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 82. AUDUBON, fol. pl. 14; Orn. Biog. Vol. 1, p. 76.
Prairie Warbler. NUTTALL, Man. Orn. Vol. 1, p. 394. AUDUBON, Birds of Am. Vol. 2, p. 63, pl. 97 (male and female). GIRAUD, Birds of Long island, p. 52.

CHARACTERISTICS. Olive: more yellowish towards the head, with bay spots on the back. Beneath yellow, spotted with black on the sides. 3 – 4 lateral tail feathers white, spotted on the inner webs. Eye-stripe and crescent beneath black. *Female*, paler yellow beneath; no eye-stripe. Length, 5 inches.

DESCRIPTION. Bill half an inch long, very slightly notched, depressed at the base. Tail more than 1·5 long, rounded; the feathers acuminated. Second quill longest; the first four subequal.

COLOR. Above yellowish olive. Frontlet, line over the eye, a space beneath, and all beneath bright yellow; the central part of the frontlet is of the general color above. From the corner of the mouth proceeds a black stripe through the eye; and from the same place, another beneath the eye in a crescent shape, leaving a bright yellow spot beneath; a similar colored stripe above the eye. A few of the feathers on the back, between the wings, tipped with chesnut or bay. Wings and tail brown; outer webs of the former tinged with yellow; the yellow bands on the wings often obsolete. Inner web of three or four of the lateral feathers of the tail spotted with white. Sides with oblong black spots. *Female*, paler beneath; the black stripes on the sides of the head wanting.

Length, 4·5 – 5·0. Alar extent, 6·0 – 7·0.

The *Prairie Warbler* is not uncommon on Long island, where I have procured many specimens. It appears in this State, from Mexico, about the commencement of May; and in the interior, is found in great numbers on the shores of Lake Erie. Along the Atlantic it has been observed as far east as Massachusetts, where it breeds as well as in this State; builds its nest in low bushes, laying 4 – 5 white eggs with brown spots in a circle round the larger end.

THE BLUE YELLOW-BACKED WARBLER.

SYLVICOLA AMERICANA.

PLATE XLVIII. FIG. 108 (MALE).

(CABINET OF THE LYCEUM.)

Parus americanus, LINNÆUS. *Creeping Titmouse*, PENNANT, Arct. Zool. Vol. 2, p. 423.
S. torquata, VIEILLOT, pl. 99; *pusilla*, WILSON, Am. Orn. Vol. 4, p. 17, pl. 28, fig. 3.
S. americana. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 83. AUDUBON, fol. pl. 13; Orn. Biog. Vol. 1, p. 78.
Finch Creeper, or *Particolored Warbler*. NUTTALL, Man. Orn. Vol. 1, p. 397.
S. americana. AUDUBON, B. of A. Vol. 2, p. 57, pl. 91. *Parula id*. BONAPARTE, Comp. List.
The Blue Yellow-backed Wood-warbler. GIRAUD, Birds of Long island, p. 60.

CHARACTERISTICS. Bluish: back yellowish olive; throat and lower mandible yellow; belly white. Wings bifasciate with white. Breast spotted with orange. *Female:* no loral black band, nor orange spots on the breast. *Young*, brownish grey. Length, 4½ inches.

DESCRIPTION. Bill very slender, carinate, 0·4 long, acute, slightly notched. First quill longest; the three first subequal. Tail very slightly emarginated, 0·7 longer than the tips of the closed wings; its feathers somewhat pointed.

COLOR. Above light blue, with a broad belt on the back of a deep reddish yellow. Wings brown, with the outer webs light blue: two white bands on the wings. Loral space black. An indistinct white stripe above and below the eye. Tail dusky, with outer webs blue: a white spot on the three external feathers. Chin, throat and all beneath yellow. An obscure interrupted black collar around the breast, and beneath this brownish orange passing into clear lemon-yellow. All beneath white. *Female*, wants the loral band and dark collar on the breast.

Length, 4·5. Alar extent, 6·5.

This beautiful warbler appears in this State about the beginning of May, when it is very common. It ranges from Mexico to the 46th parallel along the Atlantic, and is very common in the Western States. It breeds in this State, although I have never seen its nest, but have been informed that it has been observed in Putnam county. I cannot coincide with Prince Charles Bonaparte in placing it near PARUS, under a new genus. It only resembles the Titmouse in its creeping and prying habits, but is in structure a true SYLVICOLA.

THE BLACK-THROATED BLUE WARBLER.

SYLVICOLA CANADENSIS.

PLATE LVIII. FIG. 131 (MALE). PLATE XLVIII. FIG. 109 (YOUNG).

(STATE COLLECTION.)

Motacilla canadensis. LINNÆUS, Syst. Nat. p. 336.
Black-throat Warbler. PENNANT, Arct. Zool. Vol. 2, p. 399.
Sylvia canadensis. WILSON, Am. Orn. Vol. 2, p. 115, pl. 15, fig. 7 (male). *S. pusilla,* ID. Vol. 5, p. 100, pl. 43, fig. 4 (young).
S. canadensis. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 84 (male); *sphagnosa,* ID. Ib. p. 85 (adult).
S. sphagnosa. AUDUBON, fol. pl. 155 (adult); pl. 148 (young); Orn. Biog. Vol. 2, p. 279, and Vol. 5, p. 458; *canadensis,* ID. Ib. Vol. 2, p. 309.
S. id. et *canadensis.* NUTT. Man. Orn. Vol. 1, p. 406 (young); Vol. 1, p. 398 (adult male).
S. canadensis. AUDUBON, B. of A. Vol. 2, p. 63, pl. 95 (male and young).
The Black-throated Blue Wood-warbler. GIRAUD, Birds of Long Island, p. 56.

CHARACTERISTICS. Slate blue: beneath white. Throat, cheeks and sides black. Tail-feathers, except the central pair, spotted with white. *Female,* greenish olive; light yellow beneath. Length, 5 inches.

DESCRIPTION. Bill with rigid bristles at the base, extending beyond the nostrils. Third and fourth quills longest, subequal. Tail slightly emarginate, rounded when expanded, and reaching an inch beyond the tips of the closed wings.

COLOR. *Male:* Above slate blue, becoming duller towards the rump. Cheek, throat and sides of the breast jet black. Wings and tail blackish brown: base of the primaries white. Three outer tail-feathers, and sometimes all except the central pair, spotted on their inner webs near the tips. Breast, belly and vent pure white. *Female* (from a specimen in the Cabinet of the Lyceum, labelled *sphagnosa*): Above greenish olive. Wings and tail wood-brown; central feathers of the latter, bluish brown: third primary longest. A faint whitish line, and another crescent-shaped line beneath it, on the sides of the neck; the included space between these lines somewhat darker than the general color above. Chin greyish white; throat and all beneath lemon-yellow. Obsolete light marks on the lateral tail-feathers.

Length, 4·5 – 5·0. Alar extent, 7·0 – 7·5.

The differences between the sexes is so great, that it is not at all remarkable that two species have been made from them. My first knowledge of this fact was derived from the eminent artist H. INMAN, who had repeatedly found them together; and this was afterwards verified by numerous examinations of the same birds killed in this neighborhood. It is more common in the western and northern districts of this State. It winters in Mexico, enters South Carolina the latter part of March, this State about the 10th to the 20th of April, and ascends as high as 54° north. It breeds in Nova-Scotia, laying 4 – 5 flesh-colored eggs sprinkled sparsely with red at the larger end. On its return south, it is observed here in November, and as late as the 15th of December. Feeds on insects.

THE SUMMER YELLOW-BIRD.

SYLVICOLA ÆSTIVA.

PLATE LVII. FIG. 130 (MALE).

(STATE COLLECTION.)

Motacilla æstiva, GMELIN. *S. id.* VIEILLOT, pl. 95. PENNANT, Arct. Zool. Vol. 2, p. 402.
S. citrinella, Blue-eyed Yellow Warbler. WILSON, Am. Orn. Vol. 2, p. 111, pl. 15, fig. 6 (male).
S. æstiva. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 83.
S. childrenii. AUDUBON, fol. pl. 35 (young); Orn. Biog. Vol. 1, p. 130; *S. æstiva*, pl. 94, Vol. 1, p. 476, and Vol. 5, p. 453 (adult).
Summer Yellow-bird. NUTTALL, Man. Orn. Vol. 1, p. 365, figure.
Yellow-poll Warbler. AUDUBON, B. of A. Vol. 2, p. 50, pl. 88 (males).
S. æstiva, Yellow-poll Wood-warbler. GIRAUD, Birds of Long island, p. 53.

CHARACTERISTICS. Greenish yellow. Crown and head beneath bright yellow: breast and sides streaked with brownish red; lateral tail-feathers yellow within. *Female:* breast not streaked. *Young*, greenish above; throat white.

DESCRIPTION. First primary slightly the longest. Tail 0·6 longer than the tips of the closed wings, emarginate. Wings brownish, with the outer webs yellow. On the under side of the wings, the inner webs are margined with yellow for more than two thirds of their length. Secondaries broadly margined with yellow. All tail-feathers, except the central pair, broadly margined with yellow on their inner webs. *Female*, destitute of the dark streaks beneath, and of a uniform yellowish above.

Length, 4·5–4·7. Alar extent, 7·0–8·0.

This is a very common species in our State, and is called *Summer Yellow-bird*, to contradistinguish it from the *Common Yellow-bird* (*Carduelis tristis*), which is seen here at all seasons of the year. They breed in every part of the State, laying four or five light bluish white eggs dotted with brown at the larger end, and breeding twice in the season. This species is remarkable for its instinctive sagacity in getting rid of the eggs of the Cow Blackbird (*Molothrus pecoris*). As the egg is too large to be thrust out, the Yellow-bird commences a new nest above it; thus almost hermetically closing it up, and then proceeds to deposit her own eggs. In one instance, this reconstruction was twice effected; thus forming a nest of three stories. This species appears in Louisiana from Mexico, about the beginning of March; and by the end of that month, have spread over all the Atlantic States, and penetrates as high as the 68th parallel.

THE BLACK-THROATED GREEN WARBLER.

SYLVICOLA VIRENS.

PLATE L. FIG. 114 (MALE).

(STATE COLLECTION.)

Motacilla virens, GMELIN. *Sylvia id.* LATHAM.
Green Warbler. PENNANT, Arct. Zool. Vol. 2, p. 404. VIEILLOT, pl. 92.
S. virens. WILSON, Am. Orn. Vol. 2, p. 137, pl. 17, fig. 3. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 80.
S. id. AUDUBON, folio, pl. 399; Orn. Biog. Vol. 4, p. 70. NUTTALL, Man. Orn. Vol. 1, p. 376, figure.
Black-throated Green Wood-warbler. AUDUBON, B. of A. Vol. 2, p. 42, pl. 84 (male and female).
Id., S. virens. GIRAUD, Birds of Long Island, p. 57.

CHARACTERISTICS. Yellowish green. Front cheeks, sides of the neck, and line over the eye yellow. Beneath dusky white. Chin and throat black: wings bifasciate with white. *Female:* chin yellowish; throat dusky; beneath faint buff.

DESCRIPTION. Bill short, slightly curved and notched: bristles distinct. Second and third quills longest, subequal. Tail rounded, emarginate, an inch longer than the closed wings.

COLOR. Wings and tail brown; the former with two white bars. Edges of the secondaries white. Outer three tail-feathers white on both vanes to near the tip; the others more or less largely spotted with white. All above light yellowish green. Frontlet, band over the eye, cheeks and sides of the neck bright yellow. *Female:* stripe through and beneath the eye dull olive; chin slightly yellowish; breast obscurely spotted and mottled with black, descending along the flanks. The third external tail-feather spotted, and edged with white on its inner vane.

Length, 4·5 – 5·0. Alar extent, 7·5 – 8·0.

This species, which is somewhat rare, I have obtained from Long island and the southern river counties. It breeds in Massachusetts, and undoubtedly in this State, but I have not yet met with its nest. It appears with us about the 10th of May, and penetrates to the 50th degree of north latitude. It leaves us in October, on its way to its winter retreat in Mexico. It is active in the pursuit of small winged insects.

THE PINE WARBLER.

SYLVICOLA PINUS.

PLATE LIII. FIG. 120 (FEMALE).

(STATE COLLECTION.)

Sylvia pinus, LATHAM. WILSON, Am. Orn. Vol. 3, p. 25, pl. 19, fig. 4 (male). BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 81.
S. pinus. AUDUBON, fol. pl. 140 (adult); and *Vireo vigorsii* (young); Orn. Biog. Vol. 2, p. 232, and Vol. 1, p. 153.
Pine Warbler. NUTTALL, Man Orn. Vol. 1, p. 387. BONAPARTE, Comp. List, p. 22.
Pine-creeping Wood-warbler. AUDUBON, B. of A. Vol. 2, p. 37, pl. 82 (male and female).
S. pinus. GIRAUD, Birds of Long island, p. 51.

CHARACTERISTICS. Bright olive; beneath yellow. Wings and tail brown; the former bifasciate with white. Vent white: two outer tail-feathers partly white. *Female* and *young*, olive green; yellowish and grey beneath. Length, five inches.

DESCRIPTION. First and second quills subequal; the first longest; the others successively shorter. Tail emarginate, 0·6 longer than the closed wings.

COLOR. Above of a uniform rich yellow green; a shade lighter on the frontlet. A line over the eye, throat, breast and sides yellow; the breast obscurely streaked with dusky on the sides. Primaries edged with white; secondaries with light brown. Two or three of the outer tail-feathers with a band of white on the inner web near the end. *Female* and *young*, very plain colored; the upper surface dull greenish; beneath obscure brownish, or soiled white with a tinge of yellowish.

Length, 5·0–5·5. Alar extent, 8·0–8·5.

The *Pine Warbler* is not an uncommon species in this State, more particularly in the northern parts, where it breeds. Eggs greenish white, with numerous pale brown spots. They reach this State from the Southern States about the first week in April, and do not leave us until October or November. Feed on various insects and their larvæ in the summer and autumn, and on different seeds and berries during the winter. Ascend to the 50th degree of north latitude, and winter in the Southern States. Mr. Giraud has observed it breeding on Long island.

THE CHESNUT-SIDED WARBLER.

SYLVICOLA ICTEROCEPHALA.

PLATE LIX. FIG. 131 (MALE).

(STATE COLLECTION.)

Motacilla icterocephala et *pensylvanica*. LINNÆUS, Syst. pp. 333 and 334.
Bloody-side Warbler. PENNANT, Arct. Zool. Vol. 2, p. 405. VIEILLOT, pl. 90.
S. pensylvanica. WILSON, Am. Orn. Vol. 2, p. 99, pl. 14, fig. 5.
S. icterocephala. BONAPARTE, Ann. Lyc. Vol. 2, p. 80. AUDUBON, folio, pl. 59; Orn. Biog. Vol. 1, p. 306.
Chesnut-sided Warbler. NUTTALL, Man. Ornith. Vol. 1, p. 380.
Chesnut-sided Wood-warbler. AUDUBON, Birds of Am. Vol. 2, p. 32, pl. 81 (male and female). GIRAUD, Birds of Long island, p. 63.

CHARACTERISTICS. Crown yellow. Sides, from the bill, chesnut. Wings bifasciate with pale yellow. Beneath white. *Female* and *young:* Crown greenish yellow; sides pale rufous, sometimes scarcely apparent. Length, 5 inches.

DESCRIPTION. Bill short, rather straight, with porrect bristles at the base, extending beyond the nostrils. Tail slightly emarginate, extending 0·7 beyond the tips of the closed wings. Second quill longest; the second, third and fourth quills sinuated on the outer webs towards the tips.

COLOR. Greenish and slate streaked with black. Wings and tail brown. Two or three outer tail-feathers white on their inner webs. First and second row of coverts broadly tipped with yellow. Secondaries greenish yellow on their outer vanes. Crown bright lemon-yellow. From the angle of the mouth, a distinct black line goes over the eye; and from the same place, another somewhat curved beneath the eye, and leaving posterior to the eye a white spot. *Female* and *young:* Wing-coverts not so distinctly tipped with yellow; the black lines surrounding the eye obsolete. Sides with indistinct chesnut. Yellow crown tinged with green.

Length, 4·5 – 5·0. Alar extent, 7·5 – 8·0.

This rare Warbler I observed first in the western part of this State on the 20th of May, although it probably reaches the southern portions earlier. The young were obtained a few miles above the city, near the Hudson, August 20. It winters in Mexico, and does not appear to advance much farther north than Massachusetts. Feeds on flies and other insects.

THE HEMLOCK WARBLER.

SYLVICOLA PARUS.

PLATE LIX. FIG. 135.

(STATE COLLECTION.)

Sylvia parus. WILSON, Am. Orn. Vol. 5, p. 114, pl. 44, fig. 3 (adult); *autumnalis*, Vol. 3, p. 65, pl. 23, fig. 4 (young).
S. parus. BONAPARTE, Ann. Lyc. Vol. 2, p. 82; and *autumnalis*, Ib. p. 84.
S. parus. AUDUBON, folio, pl. 134; Orn. Biog. Vol. 2, p. 205 (adult); *autumnalis*, folio, pl. 88; Orn. Biog. Vol. 1, p. 447 (young).
S. parus et *autumnalis.* NUTTALL, Man. Ornith. Vol. 1, pp. 390 and 392.
S. parus. AUDUBON, Birds of Am. Vol. 2, p. 40, pl. 83.

CHARACTERISTICS. Blackish. Head yellow, spotted with black; line over the eye, neck and breast yellow: beneath yellow, streaked with dusky on the sides. *Young*, olive green, streaked with dusky; beneath dusky white; yellowish on the neck. Length, 5½ inches.

DESCRIPTION. First quill longest. Tail slightly emarginate.

COLOR. Above yellowish green, spotted with dusky. Head greenish yellow. Wings blackish brown, bifasciate with white: quills edged with greenish. The greater part of the two outer tail-feathers white. *Female*, resembles the male, with the colors more dull. *Young*, above olive-green: a pale line over the eye. Quills edged with brownish white. A patch of white on the inner web of the two external tail-feathers. Beneath, sides of the neck yellow; belly dusky white; brownish on the side.

Length, 5·5 – 6·0. Alar extent, 8·0 – 9·0.

Audubon discovered the young of this species near Lake Cayuga and Lake Champlain. I have not been able to procure a specimen in this State, except of the young from a few miles above the city. Feeds on small insects and berries. I do not know by whom the two nominal species were first clearly shown to be one, but the first indication is to be found in the *Comparative List* of Bonaparte. The *Hemlock Warbler*, as its name indicates, is most commonly found in forests, and extends its migrations from the Mississippi to the 52d degree of north latitude.

THE CAPE-MAY WARBLER.

SYLVICOLA MARITIMA.

PLATE LVIII. FIG. 132 (MALE).

(STATE COLLECTION.)

Sylvia maritima. WILSON, Am. Orn. Vol. 6, p. 99, pl. 51, fig. 3 (male).
S. maritima. BONAPARTE, Am. Orn. Vol. 1, p. 32, pl. 3, fig. 3 (female?).
Cape-May Warbler. AUDUBON, folio, pl. 414; Orn. Biog. Vol. 5, p. 156. NUTTALL, Man. Orn. Vol. 1, p. 371.
Cape-May Wood-warbler. AUDUBON, B. of A. Vol. 2, p. 41, pl. 85 (male and female). GIRAUD, Birds of Long island, p. 61.

CHARACTERISTICS. Yellow olive, spotted with black. Crown and line through the eye blackish: a chesnut spot around and behind the eye. Beneath yellow spotted with black. *Female*, dusky olive; beneath greyish, streaked. Length, 5 inches. Rare.

DESCRIPTION. Bill very slender; the notch scarcely visible. First and second quills subequal, longest. Tail emarginate, 0·5 longer than the tips of the closed wings.

COLOR. Summit of the head deep brownish black, with a faint mixture of reddish: a chesnut spot on the cheeks. Back yellow olive, spotted with black; the feathers being black in their centres, and edged with yellow olive. Quills and tail brown; the outer webs light yellowish. Rump bright greenish yellow: a broad white band over the wings. Inner webs of lateral tail-feathers broadly marked with white, except at their extreme tips. Beneath the chin and throat yellow unspotted, extending up the sides of the neck, and completely surrounding it. Black confluent spots on the breast and sides. *Female*, without the spot on the cheeks. Summit of the head olive-cinereous; beneath whitish, spotted, slightly tinged with yellowish.

Length, 4·5 – 5·5. Alar extent, 7·5 – 8·5.

This is a very rare species. My description of the male is taken from a specimen shot in May, on the south side of Long island. For the description of the supposed female, I am indebted to the work of Bonaparte cited above. Its highest northern range, according to Audubon, is the Blue mountains of Vermont. Little or nothing is known of this beautiful species: its shy and solitary habits may have contributed to elude our observation.

THE KENTUCKY WARBLER.

Sylvicola formosa.

PLATE LVI. FIG. 127 (Male).

(CABINET OF THE LYCEUM.)

Sylvia formosa. Wilson, Am. Orn. Vol. 3, p. 85, pl. 25, fig. 2. Audubon, fol. pl. 38; Orn. Biog. Vol. 1, p. 196.
S. id. Nuttall, Manual Orn. Vol. 1, p. 399.
Myiodioctes formosus. Audubon, B. of A. Vol. 2, p. 19, pl. 74 (male and female).
M. id., Kentucky Flycatching Warbler. Giraud, Birds of Long island, p. 49.

Characteristics. Olive green; beneath, and line over the eye yellow. Crown ashen: a black stripe from the bill down the sides of the neck. *Female*, without the stripe. Length, 5½ inches.

Description. Bill somewhat curved, compressed and distinctly notched, 0·5 long, with a few bristles. First quill longest. Tail slightly emarginate, 1·2 longer than the tips of the closed wings.

Color. Above rich olive green. Frontlet, at the centre of the base of the upper mandible, jet black, becoming spotted and striped on the crown of the head on a dark ashen ground. A yellow stripe over the eye, with a patch of the same behind it. Wings olive on their outer webs; brown within.

Length, 5·0–5·5. Alar extent, 7·0–8·0.

This is a rare bird in this State; the specimen in the Cabinet of the Lyceum being the only one I am acquainted with, within our territorial limits. It is very common in the Mississippi valley, but does not seem to be often found north of Carolina, except in Maryland, where it is rather common. Its present ascertained geographical range is between Mexico and New-York. It has a certain resemblance to *Wilsonia pusilla*, but is larger. Feeds on spiders, insects and their larvæ. The eggs are described as white, finely sprinkled with bright red dots. Mr. Giraud states that a few have been obtained from the south side of Long island; and it has also been observed at Hoboken, and in Rockland county in this State.

(*EXTRA-LIMITAL.*)

S. pensilis. (Aud. Vol. 2, p. 32, pl. 79.) Slate-colored. Frontlet, lores and above the eye black; throat and breast yellow; belly and line over the eye white. Wings and tail black, varied with white. Length, 5½ inches. *Southern States.*

S. tigrina. (Aud. Vol. 2, p. 69, pl. 98.) Yellow olive. Front, cheeks and sides of neck yellow; breast and belly pale yellow, streaked with dusky. Wings and tail dusky brown; the former bifasciate with white. Length, 5 inches. *Virginia.* Rare.

S. occidentalis. (Id. Vol. 2, p. 60, pl. 93.) Bluish grey. Head and cheeks yellow; head spotted with black; throat black. *Female:* throat dusky, spotted with black. Length, 3½ inches. *Texas and Columbia river.*

S. townsendi. (Id. Vol. 2, p. 59, pl. 92.) Greenish olive. Cheeks and throat black: a band over the eye, on the side of the neck, and fore part of the neck yellow. Beneath white. Length, 4½ inches. *Texas and Columbia river.*

S. audubonii. (Id. Vol. 2, p. 26, pl. 77.) Bluish ash. Crown, rump, throat and sides of the body bright yellow; frontlet, cheeks and breast black. Length, 5½ inches. *Columbia river.*

S. rathbonia. (Id. Vol. 2, p. 53, pl. 89.) Generally yellow; slightly darker above. Length, 4½ inches. *Mississippi.*

S. halseii. (Giraud, B. of Tex. plate.) Slate; white beneath. Forehead dusky: a spot of yellow at the base of the upper mandible. Cheeks brown; throat white: a broad streak of white over the eye, extending down the neck. Secondaries and coverts tipped with white. Length, 5·0. Mr. Giraud suggests that this may prove to be the female of *V. nigrescens* of Townsend. *Texas.*

S. olivacea. (Giraud, Ib. plate.) Ashy grey. Head, throat, breast, neck and hind neck dull ochre; lore, and a broad patch behind the eye black. Wings with two white bands. Abdomen soiled white, tinged with greenish yellow. Length, 5·4. *Texas.*

GENUS WILSONIA. Bonaparte.

Bill moderate, much broader than high. Upper mandible with its dorsal outline nearly straight, and very indistinctly notched. Bristles long, at the base of the bill. Tarsus with three scutellæ beneath, blended above. Second or third quills longest. Tail rounded.

Obs. This genus, which was first indicated by Bonaparte, and dedicated to the memory of the great pioneer in American ornithology, has since been very improperly given to the world under the new and less appropriate name of Myiodioctes. It comprises a few species detached from the great genus Sylvicola.

THE HOODED WARBLER.

Wilsonia mitrata.

PLATE LVII. FIG. 128 (Male).

(STATE COLLECTION.)

Motacilla mitrata, Gmelin. *Sylvia id.* Latham. *S. id.* Vieillot, pl. 77.
Hooded Warbler. Pennant, Arct. Zool. Vol. 2, p. 400.
Muscicapa cucullata. Wilson, Am. Orn. Vol. 3, p. 101, pl. 26, fig. 3.
Sylvia mitrata. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 79. Audubon, folio, pl. 90 (adult); Orn. Biog. Vol. 2, p. 66, and Vol. 5, p. 465.
Muscicapa selbyii. Audubon, fol. pl. 9; Orn. Biog. Vol. 1, p. 46.
Wilsonia mitrata. Bonaparte, Comp. and Geog. List. p. 23.
Myiodioctes mitratus. Audubon, B. of A. Vol. 2, p. 12, pl. 71 (male and female).
M. id., Flycatching Warbler. Giraud, Birds of Long island, pl 47.

Characteristics. Olive yellow above. Head, neck, chin and throat black; forehead, cheeks and beneath yellow; lateral tail-feathers partly white. *Female* and *young:* throat and breast tinged with dusky. Length, five inches.

Description. Bill stout, depressed at the base, carinate and faintly notched; the bristles at the base more than half the length of the bill. Third or fourth primary longest. Tail slightly emarginate, rounded, and 1·0 longer than the tips of the closed wings.

Color. Forehead, cheeks, breast, abdomen, lower wing and tail-coverts bright yellow. Summit of the head, hind-head, chin, throat and upper part of the breast jet black. Wings and tail dusky brown: outer vanes of the primaries and secondaries yellow olive. The three lateral tail-feathers with a patch of white on their inner webs, towards the tip. *Female:* Hind-head, throat and breast only tinged with dusky.

Length, 5·0 – 5·5. Alar extent, 8·0.

This well marked but rare species in this State, was shot in Westchester county, about the middle of May. It ranges from Mexico to 52° north. It enters Louisiana about the middle of March; and along the Atlantic coast, as far as Virginia, is rather common. Farther north, it is rare and accidental. It builds in low bushes, and lays from four to six greyish eggs with reddish brown spots at the larger end. A bold courageous bird, feeding on insects which it takes on the wing.

THE GREEN BLACK-CAPPED WARBLER

WILSONIA PUSILLA.

PLATE LII. FIG. 117 (MALE).

(STATE COLLECTION.)

Muscicapa pusilla. WILSON, Am. Orn. Vol. 3, p. 103, pl. 26, fig. 4 (male).
Sylvia wilsonii. BONAPARTE, Ann. Lyc. Nat. Hist. New-York, Vol. 2, p. 86.
Muscicapa id., Green Black-capped Flycatcher. AUDUBON, folio, pl. 124; Orn. Biog. Vol. 2, p. 148.
M. id. NUTTALL, Man. Ornith. Vol. 1, p. 409.
Myiodioctes wilsoni. AUDUBON, Birds of Am. Vol. 2, p. 21, pl. 75.
M. id., Wilson's Flycatching Warbler. GIRAUD, Birds of Long island, p. 51.

CHARACTERISTICS. Olive green. Crown black; front, line over the eye, and all beneath yellow. *Female* and *young*, without the black crown, or very indistinct. Length, four and a half inches.

DESCRIPTION. Bristles extending half the length of the bill. Second and third primaries longest, subequal; the first shorter than the fourth. Tail long, rounded, and extending one inch beyond the tips of the closed wings.

COLOR. Back, rump and upper tail-coverts yellowish green. Frontlet, line over the eye, and all beneath rich lemon-yellow. Crown and hind head deep purplish glossy black, but varying in intensity with different individuals. Outer webs of the tail-feathers olive-green.

Length, 4·0 – 4·5. Alar extent, 6·0 – 6·5.

This little Warbler, according to Audubon, passes rapidly through the United States on its way to the northern districts. It appears in this State, near New-York, in the early days of May; the only one I have seen within our limits having been shot on the eighth of that month. In June it appears in Labrador, and breeds in those regions as far as 58° north. It extends westward to the Columbia river. Its return southward must be late, as Audubon noticed them in the State of Maine in the month of October. In the southern part of this State, they are very rare. They build their nests on low bushes, laying about four greyish eggs, sprinkled with reddish dots in a circle around the larger end. Feed on insects, which they take on the wing.

(*EXTRA-LIMITAL.*)

W. bonapartii. (AUD. Birds of Am. Vol. 2, pl 73.) Greyish blue; beneath yellow: two outer quills edged with white. Bristles and tail elongated. Length, 5½ inches. *Louisiana.* Very rare.

W. minuta. (ID. Ib. Vol. 2, pl. 67.) Greenish olive; beneath pale yellow, fading into white behind. Wings and tail brownish; the former bifasciate with whitish.

GENUS CULICIVORA. Swainson.

Bill moderate, depressed, rapidly attenuated to a slender tip. Upper mandible with a distinct ridge; the tip narrow, bent. Bristles at the base of the bill. Tarsus very slender, with the upper scutella indistinct, longer than the middle toe: hind toe larger. Second or fourth quill longest. Tail longer than the body, slender, rounded.

Obs. This genus was founded by Swainson on a species detached from Muscicapa, and connects this family with the succeeding.

THE BLUE-GREY GNATCATCHER.

Culicivora cœrulea.

PLATE LVI. FIG. 126 (Male).

(STATE COLLECTION.)

Muscicapa cœrulea. Wilson, Am. Orn. Vol. 2, p. 164, pl. 18, fig. 5.
Sylvia cœrulea. Bonaparte, Ann. Lyc. N. York, Vol. 2, p. 85.
Muscicapa id. Audubon, folio, pl. 84; Orn. Biog. Vol. 1, p. 431.
Blue-grey Sylvan Flycatcher. Nuttall, Man. Ornith. Vol. 1, p. 297.
Culicivora cœrulea, Bonap. Audubon, B. of A. Vol. 2, p. 244, pl. 70. Giraud, Birds of Long Island, p. 46.

Characteristics. Bluish grey; beneath bluish white. Tail black. *Female*, without the black band over the forehead and eyes. Length, four and a half inches.

Description, of a young male shot May 5, Orange county. Bill somewhat straight, flattened, curved at the tip: notch conspicuous. A few porrect bristles at the base of the bill. Tail rounded, 1·3 longer than the tips of the folded wings. Second quill-feather longest.

Color. Light blue. Summit of the head with an anterior black marginal stripe. Rump white. Primaries brown, edged on their external vanes with white. The outer tail-feather white on both vanes for more than two-thirds of its whole length; the next white along the greater part of its outer vane, and on its inner vane towards the tip; the succeeding feather obscurely tipped with white. Throat soiled white; breast bluish white; belly and vent pure white. The *adult male* has the dark black band of the frontlet extending in a narrow line over the eye; the tail glossy black. *Female*, with the tints of blue not so bright, and the black frontlet and line over the eye wanting.

Length, 4·5. Alar extent, 6·5.

This lively little Gnatcatcher is found, according to Lichtenstein, in Mexico during the winter. It arrives in Louisiana about the middle of March, and in this State is seen in the

early part of May. They do not appear to advance farther north than the 46th parallel. They extend over the western States. It is not a numerous species. It leaves this State towards the end of September. It lays 4 – 5 pure white eggs, with a few reddish dots at the larger end. I am not informed whether it breeds in this State, but presume this to be the case at least in the western counties. It is exceedingly active in its movements, and is perpetually on the wing in search of the smaller winged insects, and particularly of mosquitoes. It chiefly affects humid places and the borders of small streams.

(*EXTRA-LIMITAL.*)

C. townsendi. (*Philogonys id.* Sw. Aud. B. of Am. Vol. 1, p. 243, pl. 69). Dull brownish grey. Basal part of primaries pale yellow: middle tail-feathers greyish; the others blackish; the outer white. Tail long, straight, emarginate and rounded. Length, 8·5. *Columbia river.*

FAMILY MUSCICAPIDÆ.

Bill moderate, triangular, robust, with elongated bristles at the base. Upper mandible inflected at the tip, notched; lower with the tip somewhat ascending. Nostrils basal, rounded, patulous, partly covered by bristles. Feet generally short. Tarsus short, slender, with broad scutellæ. Hind toe not proportionally large. Wings long: the first quill usually long; the outer three longest. Tail various. Tongue depressed, sagittate, bristly at the tip. Solitary, taciturn, untamable.

GENUS MUSCICAPA. Linnæus.

Bill broad at base, gradually compressed towards the end. Upper mandible with a very small notch near the tip. Tarsus with six scutellæ, three of which almost meet behind. Toes free, all scutellate above. Second and third quills longest; outer quills sometimes attenuated. Tail long, even or emarginated.

THE AMERICAN REDSTART.

Muscicapa ruticilla.

PLATE XXXI. FIG. 68 (Male).

Muscicapa ruticilla, Lin. *Black-headed Warbler*, Pennant, Arct. Zool. Vol. 2, p. 398.
Yellow-tailed Warbler. Id. Ib. Vol. 2, p. 406 (female).
American Redstart. Wilson, Orn. Vol. 1, p. 103, pl. 6, fig. 6 (male). Id. Ib. Vol. 5, p. 119, pl. 45, fig. 2 (young).
M. ruticilla. Audubon, folio, pl. 40; Orn. Biog. Vol. 1, p. 202.
Setophaga id. Richardson, F. B. A. Vol. 2, p. 223. Nuttall, Man. Orn. Vol. 1, p. 291, figure.
M. id. Audubon, Birds of Am. Vol. 1, p. 240, pl. 68 (male and female). Giraud, Birds of Long island, p. 45.

Characteristics. Black. Belly white: base of the primaries, and of the tail-feathers (except the central pair) orange-red. *Female*, *young* and *autumnal male*, greenish olive; sides of the breast and base of the tail-feathers yellow. Length, five inches.

Description. First quill shorter than the fourth; second and third longest, subequal. Tail rounded.

Color. Head, neck, breast and back black, with bright glossy blue reflexions. Tail with a broad terminal band of black. Sides of the breast, lower wing-coverts, base of the primaries, and of the tail-feathers (except the central pair) orange-red. In some individuals, I have noticed these orange marks to approach a bright scarlet. Abdomen and lower tail-coverts white. Bill brownish black. *Female:* Olive brown above; white, tinged with yellow, beneath. Those parts which in the male are orange, in the female are yellow. *Young male*, above greenish; inside of the wings, and a band across the wings yellow.

Length, 5·0 – 5·5. Alar extent, 6·0 – 6·5.

This beautiful bird winters within the tropics, and is found during the summer throughout the Union. It is even found extending its migrations as far north as the 62d parallel. It arrives in Louisiana in the beginning of March, and reaches this State towards the end of April. On its return southward, it leaves us in September. It is shy and solitary, avoiding the haunts of man, and feeding on various insects and their larvæ.

The *American Redstart* differs so much in the brilliancy of its colors, and in some of the characteristics of its congeners, that its place in the systems has been frequently changed. I prefer retaining him in his present situation.

THE SMALL GREEN-CRESTED FLYCATCHER.

MUSCICAPA ACADICA.

PLATE XXX. FIG. 66.

(STATE COLLECTION.)

Muscicapa acadica, GMELIN. *Lesser-crested Flycatcher*, PENNANT, Arct. Zool. Vol. 2, p. 386.
M. querula. WILSON, Am. Orn. Vol. 2, p. 77, pl. 13, fig. 3.
M. acadica. AUDUBON, fol. pl. 144; Orn. Biog. Vol. 2, p. 256, and Vol. 5, p. 427. NUTTALL, Manual Orn. Vol. 1, p. 288.
Platyrhyncos virescens. VIEILLOT, Nouv. Dict.
Small Green Flycatcher. AUDUBON, B. of A. Vol. 1, p. 221, pl. 62 (male and female). GIRAUD, Birds of Long Island, p. 40.

CHARACTERISTICS. Olive green; beneath greenish yellow. Throat greyish; lower mandible flesh-colored. Tail even, or slightly emarginate. Length, 5½ inches.

DESCRIPTION. First primary shorter than the fourth. COLOR. Above dusky olive green, often verging to brown. Beneath yellowish white; darker across the breast, and ash-grey on the throat. Wings and tail dusky brown; the former with two rust-colored or dusky white bands: secondaries broadly edged with the same. A narrow white ring around the eye, and occasionally a small lightish spot beneath the eye. Tail dusky brown; the outer feathers occasionally light-colored. Legs and feet black.

Length, 5·5. Alar extent, 9·0.

The *Small Green-crested Flycatcher*, or *Small Pewee* as he is sometimes called, in common with some others, from the sound of its usual note, winters in Mexico, where it was observed by Swainson, and appears in our State early in May, where it breeds. It ascends as high as the 50th degree of north latitude. It lays from 4 – 6 pure white eggs. In the spring and summer it feeds on insects, and during the autumn on berries and grapes. Its habits are shy and solitary, generally preferring the recesses of the forest. It usually leaves us on its southern migration in the month of September.

THE YELLOW-BELLIED FLYCATCHER.

MUSCICAPA FLAVIVENTRIS.

Muscicapa flaviventris. BAIRD, Proceedings Ac. Nat. Sc. Vol. 1, p. 283.
M. id. AUDUBON, B. of A. Vol. 7, p. 341, pl. 490 (male).

CHARACTERISTICS. Olive green: sulphur-yellow beneath. Front dark olive. Orbits yellow. Tail emarginate. Length, 5·1.

DESCRIPTION. Bill broad and robust, tapering rapidly to the point; ridge on the upper mandible obvious: bristles on the front and sides of the base of the bill. Wings 2·5. Third and fourth quills subequal, or the fourth slightly longest; first and sixth subequal. Feathers of the head somewhat elongated, but scarcely forming a definite crest. Tail 1·9, emarginate.

COLOR. Bill blackish brown above; flesh-colored beneath. Head and body above dark glossy olive green; the head, in certain lights, exhibiting obsolete darker spots. Circle round the eyes, and an obsolete streak towards the bill, light yellowish. Abdomen, under tail-coverts and axillaries light sulphur-yellow. Neck and breast light yellow olive. Ridge of the wings bright yellow. Quills and tail light hair-brown. Lower row of lesser wing-coverts and secondary coverts tipped with yellowish white, forming two bands across the wings. Wing-coverts and secondaries brownish black. Secondaries edged anteriorly with yellowish white. *Female*, smaller.

Length, 5·1–5·2.

This beautiful little species was first discovered by Mr. S. F. Baird, at Carlisle, Pennsylvania, and described in the work cited above. In a general system it must follow *M. acadica*, with which it is closely allied. Its distinctive characters appear to consist mainly in the deep yellow color of its abdomen, and its emarginate tail. The specimen above described was kindly communicated by Mr. Giraud, from the cabinet of G. W. Lawrence, who procured it from Long island, where it is doubtless not uncommon, although it had been previously confounded by Mr. Audubon and other ornithologists with the *M. acadica*.

THE WOOD PEWEE.

MUSCICAPA VIRENS.

PLATE XXXI. FIG. 69.

(STATE COLLECTION.)

Muscicapa virens, LINNÆUS. *Cinereous Flycatcher*, PENNANT, Arct Zool. Vol. 2, p. 387.
M. rapax, BARTRAM. WILSON, Am. Orn. Vol. 2, p. 81, pl. 13, fig. 5.
M. virens. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 68.
M. id. AUDUBON, fol. pl. 115 (male); Orn. Biog. Vol. 2, p. 93, and Vol. 5, p. 425.
Wood Pewee. NUTTALL, Man. Orn. Vol. 1. p. 285. AUDUBON, B. of A. Vol. 1, p. 231, pl. 64 (male).
Wood Pewee Flycatcher. GIRAUD, Birds of Long island, p. 43. *Tyrannula* of recent authors.

CHARACTERISTICS. Dark brown olive; beneath pale greenish yellow. Upper mandible black; lower yellow. Tail emarginate: second primary longest. Length, six inches.

DESCRIPTION. Bill with sides somewhat convex; the edges sharp, and the tip slightly bent and notched. Head subcrested. Tail deeply emarginate.

COLOR. Above dusky olive inclining to greenish; the upper part of the head brownish black: a pale whitish ring around the eye. Two obscure greyish bands on the wings; secondaries bordered with greyish. Beneath pale greenish yellow; throat and breast greyish tinged with green. Upper mandible and feet black.

Length, 6·0 – 6·5. Alar extent, 10·0 – 11·0.

The *Wood Pewee* winters in Mexico, where it was noticed by Lichtenstein, and appears in our State about the middle of May. It advances as far north as the 50th degree, and is seen on the Rocky mountains. It breeds in this State, laying three or four cream-colored eggs with irregular spots of brown towards the larger end. It feeds on insects, which it seizes with great adroitness on the wing. The male and female scarcely differ in their plumage.

THE PHŒBE-BIRD.

MUSCICAPA FUSCA.

PLATE XXX. FIG. 67.

(STATE COLLECTION.)

M. fusca, GMELIN. *Dusky Flycatcher.* PENNANT. Arct. Zool. Vol. 2, p. 389.
M. nunciola, BARTRAM. WILSON, Am. Orn, Vol. 2. p. 78, pl. 13, fig. 4.
M. fusca. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 68. AUDUBON, folio pl. 120; Orn. Biog. Vol. 2, p. 122, and Vol. 5, p. 424.
Pewit Flycatcher, or *Phœbe.* NUTTALL, Man. Orn. Vol. 1, p. 278, figure.
M. fusca. AUDUBON, B. of A. Vol. 1, p. 223, pl. 63 (male and female).
M. id., Pewee Flycatcher. GIRAUD, Birds of Long island, p. 42.

CHARACTERISTICS. Dark olive brown. Bill entirely black. Tail emarginate; the exterior feathers whitish on the outer web. Length, seven inches.

DESCRIPTION. Head with an erectile crest. Tail emarginate, an inch and a half longer than the tips of the closed wings. Third and fourth primaries longest, subequal.

COLOR. Above dark olive; the head darker, approaching to brownish black. Wings and tail dusky approaching to black; the former edged on every feather with yellowish white. Legs and bill black. Beneath pale whitish or greenish yellow; the breast greyish. Sexes nearly similar.

Length, 7·1. Alar extent, 9·0 – 9·5.

This familiar and favorite little bird winters from South-Carolina to Mexico. It appears with us in the latter days of March or beginning of April, and their appearance is hailed as the certain harbinger of spring. They leave us in October or November, according to the nature of the season. It extends its migrations north to the 57th parallel. It breeds in every part of the State, laying from four to six white eggs with a few reddish spots near the larger end. Feeds in the spring and summer on insects; in the winter, on berries and seeds of various kinds.

(*EXTRA-LIMITAL.*)

M. pusilla. (Aud. B. of A. Vol. 1, pl. 66.) Greenish brown. Breast and sides grey; beneath, pale yellow: a pale narrow ring surrounding the eye. Length, 5 inches. *Labrador* (not yet observed in this State).

M. trailli. (Id. Ib. Vol. 1, pl. 65.) Dusky olive; head darker. Wings bifasciate with greyish white; secondaries bordered with the same. Throat and breast grey; pale yellow beneath. Length, 5 inches. *Columbia river, Arkansa.* Closely allied to the preceding.

M. saya. (Id. Ib. Vol. 1, p. 59.) Greyish brown. Tail black: a dusky spot before the eye; lower wing-coverts reddish white. Length, 7 inches. *Columbia river, Arkansa, Texas.*

M. phœbe. (Richardson, F. B. A. pl. 46.) Olive brown. Dusky grey on the neck; breast and sides tinged with olive; abdomen pale dull yellow. Length, 6·8. *Columbia river, Fur countries.* Allied to *fusca.*

M. nigricans. (Aud. B. of A. pl. 60.) Dark sooty brown; beneath white. Tail slightly emarginate. Length, seven inches. *Mexico, California, Texas.*

M. texensis. (Giraud, Birds of Texas, plate.) Crown, with a concealed patch of bright vermilion; back, scapulars, wings, rump and tail brown. Throat, foreneck, and a band over the eyes and across the front, white. Tail long, even, and of twelve feathers. Length, 7·25. *Texas.*

M. laurentii. (Id. B. of Texas.) Above dull brown: throat, foreneck and breast cinereous; beneath yellow. Bill robust. Length, 6·45. *Texas.*

M. fulvifrons. (Id. B. of Tex. plate.) Brown; beneath buff. Secondaries broadly edged with white on the outer webs. Tail emarginate; the outer vane of first feather white. Bill feeble. Length, 4·8. *Texas.*

M. derhami. (Id. Ib. plate.) Slate. Lores and forehead black; crown and occiput chesnut brown, spotted with dusky. Wings and tail brown: four outer tail-feathers spotted with white. Throat and foreneck black; breast and belly light red. Length, 5·0. *Texas.*

M. belli. (Id. Ib. plate.) Olive-green. Throat, breast and abdomen yellow; crown, cheeks, and a spot before the eye chesnut-brown: a yellow streak from the base of the bill, passing over the eye, and somewhat dilated on the sides of the neck. Tail graduated. Length, 4·0. *Texas.*

M. leucomus. (Id. Ib. plate.) Black: beneath bright red. Throat and foreneck black. Outer webs of the three lateral tail-feathers white. A conspicuous patch of white on the wings. Length, 5·5. *Texas.*

M. brasieri. (Id. Ib. plate.) Olivaceous; yellow beneath. Forehead and loral space yellow; crown and occiput orange, bordered with black; cheeks and sides of the neck greenish yellow. Length, 5·0. *Texas.*

M. rubrifrons. (Id. Ib. plate.) Back, scapulars and upper tail-coverts ash-grey; rump white. Forehead, space round the eyes, loral space, throat and foreneck red. Wings and tail brown. Sides of body dusky; beneath white. Length, 4·0. *Texas.*

GENUS TYRANNUS. Vieillot.

Head distinctly crested, often with a vermilion patch on the summit. Outer quills attenuated towards the ends.

THE KING-BIRD.

Tyrannus intrepidus.

PLATE XXXIII. FIG. 72.

(STATE COLLECTION.)

Lanius tyrannus. Linnæus, Syst. Nat.
Tyrannus pipiri et *intrepidus.* Vieillot, pl. 44.
Muscicapa tyrannus. Wilson, Am. Orn. Vol. 1, p. 66, pl. 13, fig. 1. Audubon, folio, pl. 79; Orn. Biog. Vol. 1, p. 403, and Vol. 5, p. 420.
King-bird, or *Tyrant Flycatcher.* Nuttall, Manual Orn. Vol. 1, p. 265. Audubon, B. of A. Vol. 1. p. 204, pl. 56.
M. tyrannus, Tyrant Flycatcher. Giraud, Birds of Long Island, p. 39.

Characteristics. Blackish; beneath whitish. Tail nearly even, black, with a terminal band of white. Length, 8 – 9 inches.

Description. Bill depressed, wide at the base, gradually tapering to the tip, where it forms a small hook: lower mandible flatly convex. Crest erectile. The two outer quills attenuated at the tip; second quill longest. Tail nearly even, 1·5 longer than the tips of the closed wings.

Color. Dark ash above, approaching to black. Head and tail nearly black. When the dark feathers of the head are removed, we observe a bright vermilion spot bordered with yellow. Wings olive brown, bordered with dull white. Beneath pure white, except the breast and under tail-coverts, which are light ash. Bill and feet black. *Female,* resembles the male, except that the colors above incline to olive brown; beneath dusky white.

Length, 8·0 – 9·0. Alar extent, 14·0 – 15·0.

The *King-bird,* as it is called in this State, or *Field Martin* as it is termed elsewhere, is a well known and common species. It winters in Mexico, enters Louisiana about the middle of March, and appears here in the latter part of April or beginning of May. They continue their northward course as far as the 57th parallel of latitude. It spreads over the continent to Columbia river. It leaves us for its winter quarters in September or October, according to the season. Breeds in every part of the State, laying from 4 – 6 yellowish white eggs with a few spots of deep brown. Feeds on berries and seeds, beetles, canker-worms, and insects of every description. By this, and by his inveterate hostility to rapacious birds, he more than compensates for the few domestic bees with which he varies his repasts. Like the Hawks and Owls, he ejects from his mouth, in the shape of large pellets, all the indigestible parts of insects and berries.

THE OLIVE-SIDED KING-BIRD.

TYRANNUS COOPERI.

PLATE XXXIII. FIG. 73.

(CABINET OF THE LYCEUM.)

Muscicapa inornata et cooperi. NUTTALL, Man. Orn. Vol. 1, p. 282.
M cooperi. AUDUBON, fol. pl. 174; Orn. Biog. Vol. 2, p. 422, and Vol. 5, p. 422.
Tyrannus borealis. RICHARDSON, F. B. A. Vol. 2, p. 141.
M. cooperi. AUDUBON, B. of Am. Vol 1, p. 212, pl. 58 (male and female).

CHARACTERISTICS. Dusky brown. Head darker, without a colored spot. Sides olive grey; lateral space beneath the wing white. Tail emarginate.

DESCRIPTION. Bill stout, 0·5 long and very broad. Upper mandible distinctly carinated. Second quill longest; first and third equal; the three first slightly attenuated towards the ends. Tail emarginate.

COLOR. Dusky brown above. Wings and tail blackish brown, with a few of the tips and edges of the feathers of the wings margined with dusky white, often entirely plain. Crest plain, dark brown. Rictus bright yellow, as well as the inside of the mouth. Upper mandible black; the lower horn-color. Chin and throat white; breast and belly brownish, becoming tinged with yellowish towards the vent, and dusky olive on the sides. Legs and feet black. Iris dark hazel. *Female* and *young*, similar to the adult.

Length, 6·5 – 7·0. Alar extent, 12·5.

This plain-colored species was discovered by William Cooper (from whom it derives its name) in 1829, and first described by Nuttall from Massachusetts (where it breeds), and subsequently by Richardson in 53° of north latitude. Audubon met with it in Texas and Georgia, and Nuttall subsequently observed it as a common species on the banks of the River Columbia. It probably winters in Mexico, and the main stream of migration is perhaps directed along the Pacific coast. It has been seen in New-Jersey; and although it doubtless breeds in this State, I have not yet met with a specimen here. Its eggs are yellowish cream-white, with spots of reddish brown. Habits similar to those of the preceding.

THE GREAT-CRESTED KING-BIRD.

Tyrannus crinitus.

PLATE XXXII. FIG. 70.

(CABINET OF THE LYCEUM.)

Muscicapa crinita, Lin. *Crested Flycatcher*, Pennant, Arct. Zool. Vol. 2, p. 386.
M. id. Wilson, Am. Orn. Vol. 2, p. 75, pl. 13, fig. 2. Audubon, folio, pl. 129; Orn. Biog. Vol. 2, p. 176, and Vol. 5, p. 423. Id. B. of Am. Vol. 1, p. 209, pl. 57 (males). Giraud, Birds of Long island, p. 41.

Characteristics. Greenish olive. Throat ash; belly yellow. Wing and tail-feathers rusty on their inner webs. Length, 8 – 9 inches.

Description. Feathers of the head pointed. Third primary longest; the first scarcely exceeding the sixth: they are not attenuated towards their tips. Tail elongated, nearly even.

Color. Above greenish olive. Wing-coverts crossed with two irregular bars of yellowish white. The inner webs of all the tail-feathers, except the central pair, rusty red; primaries edged with the same. Crest with its feathers dark brown in their centres. Beneath, the throat and breast bluish ash, becoming pale yellow on the abdomen and vent. Irides hazel. Bill, legs and feet greyish black. *Female*, scarcely to be distinguished from the male.

Length, 8·5. Alar extent, 12·5 – 13·0.

This bird enters Louisiana in March, and appears to prefer the direction of the Mississippi valley, but does not advance far north in that direction. The interior of Massachusetts, where it has been observed to breed, appears to form its extreme northern limits towards the Atlantic. It is of course rare in our State. The eggs are cream-colored, thickly streaked with purplish brown. Feeds upon insects, grapes, berries, etc. Bold and fierce in its habits.

(*EXTRA-LIMITAL.*)

T. dominicensis. (Aud. B. of A. pl. 55.) Dull ash grey. Crest vermilion. Wings and tail chocolate. Beneath ash tinged with yellow. Length, 8 – 9 inches. *Carolina, Florida.*

T. verticalis. (Id. B. of A. Vol. 1, pl. 54.) Plumbeous tinged with olive green. Crest vermilion. Throat and breast ash grey; beneath yellow: outer tail-feather white on the outer web. *Mexico, Texas, Columbia river.*

Genus Milvulus, *Swainson.* Second primary longest; third and first subequal: the three first abruptly notched towards the attenuated tip. Tail excessively elongated and deeply forked.

M. tyrannus. (Bonap. Am. Orn. Vol. 1, pl. 1. Aud. B. of A. Vol. 1, pl. 52.) Ashen; beneath white. Head black: a yellow spot on the crown. Tail more than twice the length of the body. Length, 14 inches. *Louisiana, Kentucky.* In New-Jersey.

M. forficatus. (Bonap. Ib. pl. 2. Aud. Ib. pl. 53.) Light ash; beneath white. Head darker; axillary feathers rosaceous. Tail longer than the body; outer feathers rosaceous. Length, 11 inches. *Arkansa.*

FAMILY VIREONIDÆ.

Bill moderate, robust, broader than high at the base, which is furnished with bristles. Dorsal outline of the upper mandible convex (in one genus much arched), notched; tip bent. Tarsus moderate, compressed, with seven or eight scutellæ. Tail various.

Obs. This family now includes three American genera, or two according to the ideas of some systematists.

GENUS VIREO. Vieillot.

Upper mandible strongly notched; lower mandible shorter, recurved at the tip, with small bristles at the base. Nostrils basal, rounded. Tongue cartilaginous, bifid at the tip. Tarsus longer than the middle toe, compressed, with seven scutellæ. Wings pointed; second or third quill longest. Tail moderate, nearly even. General color with a tinge of green. Female resembling the male.

Obs. A genus peculiar to America.

THE YELLOW-THROATED GREENLET.

Vireo flavifrons.

PLATE XXXV. FIG. 77.

(STATE COLLECTION.)

Vireo flavifrons. Vieillot, Ois. de l'Amerique, pl. 54.
Muscicapa sylvicola. Wilson, Am. Orn. Vol. 1, p. 117, pl. 7, fig. 3.
V. flavifrons. Bonaparte, Annals Lyc. Nat. Hist. Vol. 2, p. 70. Audubon, folio, pl. 119; Orn. Biog. Vol. 2, p. 119, and Vol. 5, p. 423.
Yellow-throated Vireo. Nuttall, Man. Orn. Vol. 1, p. 302. Audubon, Birds of Am. Vol. 4, p. 141, pl. 238. Giraud, Birds of Long island, p. 159.

Characteristics. Olive green. Frontlet, line round the eye, throat and breast yellow; belly white. Wings with two white bands, and with the tail dark brown. Length, 5 – 6 inches.

Description. Bill with three or four slight bristles at the base. The two exterior toes united to the middle as far as the first joint. Tail emarginate.

Color. Greenish olive. Throat and breast dull lemon-yellow; lesser wing-coverts, lower part of the back, the rump and the flanks bluish ash. Primaries edged with pale ash; secondaries bordered with white. Tail deep brown; the three exterior feathers edged on each vane with white. *Female* and *young*, with duller colors.

Length, 5·5 – 6·0. Alar extent, 9·0 – 9·5.

This bird winters in Texas and Mexico, and must pass rapidly over the southern States, for they are rarely observed in those regions until they reach Pennsylvania. It is first seen here at the commencement of May, and leaves us in September, having advanced north as far as Nova-Scotia. It is not as common with us as the *V. noveboracensis*. It is said to construct a pendulous nest, in which it deposits 4 – 5 white eggs spotted with reddish brown. Its food in the spring and summer consists of caterpillars, small moths, wasps and wild bees; and in the autumn and winter, of seeds and berries.

THE SOLITARY GREENLET.

VIREO SOLITARIUS.

PLATE XXXV. FIG. 76.

(STATE COLLECTION.)

Muscicapa solitaria. WILSON, Am. Orn. Vol. 2, p. 143, pl. 17, fig. 6.
Vireo id. VIEILLOT, Nouv. Dict. BONAPARTE, Ann. Lyc. Vol. 2, p. 70. AUDUBON, folio, pl. 23; Orn. Biog. Vol. 1, p. 147, and Vol. 5, p. 482.
Solitary Vireo. NUTTALL, Man. Ornith. Vol. 1, p. 305. AUDUBON, B. of Am. Vol. 4, p. 144, pl. 239 (male and female). GIRAUD, Birds of Long island, p. 160.

CHARACTERISTICS. Dusky olive. Head bluish grey: line round the eye white. Breast pale ash; belly white, yellow on each side. Length, 5 inches.

DESCRIPTION. Bill very short, and nearly as broad as in MUSCICAPA. Tail emarginate.

COLOR. Back and upper tail-coverts dusky olive; primaries and tail-feathers bordered with light green. A line of white from the nostrils to the eye, which it encircles. Cheeks, upper part of the head and neck dark bluish grey: a dusky spot before the eye. One, and more frequently two whitish bands across the wings. Tail brownish black; the outer feathers edged with greyish white. Lower mandible, legs and feet pale bluish grey. *Female:* Head dusky olive; throat greenish.

Length, 5·0 – 5·5. Alar extent, 8·0 – 8·5.

This is the rarest of the genus found in this State. It winters in Mexico, according to Lichtenstein, and has been traced as far north as Nova-Scotia. On the western side of the continent, it extends to Columbia river. The specimen figured above, was shot, May, 1837, near New-York city. Its eggs are 4 – 6 in number, light flesh-colored, and spotted with brownish red at the larger end. Feeds on insects and berries.

THE WHITE-EYED GREENLET.

VIREO NOVEBORACENSIS.

PLATE XXXVI. FIG. 78.

(STATE COLLECTION.)

Muscicapa noveboracensis, GM. *Green Flycatcher*, PENNANT, Arct. Zool. Vol. 2, p. 389.
M. cantatrix. BARTRAM, Travels, p. 290.
V. musicus. VIEILLOT, Ois. de l'Am. pl. 52.
M. cantatrix. WILSON, Am. Orn. Vol. 2, p. 166, pl. 18, fig. 6.
M. noveboracensis. BONAPARTE, Ann. Lyc. p. 70. AUDUBON, folio, pl. 63; Orn. Biog. Vol. 1, p. 328, and Vol. 5, pp. 431, 433. ID. Birds of Am. Vol. 4, p. 146, pl. 240 (male). GIRAUD, Birds of Long island, p. 158.

CHARACTERISTICS. Dark olive; beneath white; sides lemon-yellow: line round the eye, and spot near the nostrils, yellow. Irides white. Length, 5 inches.

DESCRIPTION. Bill very short, straight, flattened at the base, curved abruptly at the tip. Third quill longest. Tail nearly even, slightly emarginate.

COLOR. Above deep olive, with the head somewhat darker. Frontlet, lore, and line above the eye yellow. Primaries umber-brown, edged with yellow: two white bands over the wings. Feathers of the tail edged with yellow. Throat white; sides of the neck ash grey; beneath soiled white; the sides lemon-yellow: lower mandible light bluish.

Length, 5·0 – 5·5. Alar extent, 7·0 – 7·3.

The *White-eyed Greenlet* winters in the maritime parts of the Southern States, and also in Mexico. According to Audubon, it enters Louisiana the latter end of February or beginning of March. It appears in this State in the early part of April, where it is common. It extends its migrations along the coast to Labrador, and on the western side of the continent to Columbia river. It breeds in this State, laying from 4 – 6 white eggs with a few dark spots at the larger end. Food, insects and berries. Its notes are said to possess uncommon sweetness. From its habit of using bits of newspapers in the construction of its nest, Wilson says that it is sometimes called the *Politician;* intending thereby a sly allusion to feathering its nest by the use of even the commonest materials. It leaves us in October, for its southern winter quarters.

THE WARBLING GREENLET.

Vireo gilvus.

PLATE XXXIV. FIG. 74.

(STATE COLLECTION.)

Muscicapa gilva. Vieillot, Ois. de l'Amerique, pl. 34. *S. gilva,* Id. Nouv. Dict.
M. melodia. Wilson, Am. Orn. Vol. 5, p. 85, pl. 42, fig. 2.
Vireo gilvus. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 70. Audubon, folio, pl. 118; Orn. Biog. Vol. 2. p. 114, and Vol. 5, p. 433.
Warbling Vireo. Nuttall, Man. Ornith. Vol. 1, p. 309. Audubon, Birds of Am. Vol. 4, p. 149, pl. 241 (male and female).
Warbling Greenlet. Giraud, Birds of Long island, p. 161.

Characteristics. Pale green olive; head and neck ash; beneath, and line over the eye whitish. Wings not banded. Irides brown. Bill short. First and fifth primaries equal. Length, 5 inches.

Description. Bill broad and short, distinctly curved and notched, 0·5 long to the rictus. Tail emarginate, extending 1·2 beyond the tips of the closed wings.

Color. Above pale green, mixed with ash on the neck and shoulders. The line over the eye, noticed in the specific phrase, was not obvious in the specimen from which our description was taken. Lower parts whitish; sides of the body, and beneath the wings, pale grecnish yellow. Legs and feet light blue. Wings and tail brown; the feathers edged with light green. Lower mandible flesh-colored. Iris hazel.

Length, 5·0. Alar extent, 7·5.

This musical little bird reaches us from tropical America about the beginning of May, and breeds in various parts of the State. It has not yet been noticed in the States south of Virginia, from which we infer that its transit through those regions must be very rapid. Along the Atlantic coast, it has been seen as far north as 46°, and on the western side of the continent to Columbia river. It builds a pendant nest, which contains 4 – 6 white eggs, with confluent spots and thread-like brown lines on the larger end. Feeds on caterpillars, and various seeds and berries. Leaves us in the early part of October.

THE RED-EYED GREENLET.

VIREO OLIVACEUS.

PLATE 36. FIG. 79. — PLATE 34. FIG. 75 (VARIETY).

(STATE COLLECTION.)

Muscicapa olivacea, LINNÆUS. *Red-eyed Flycatcher*, PENNANT, Arct. Zool. Vol. 2, p. 387.
Sylvia olivacea. WILSON, Am. Orn. Vol. 2, p. 55, pl. 12, fig. 2.
M. olivacea. VIEILLOT, Ois. de l'Am. pl. 38; *Sylvia altiloqua*, Nouv. Dict.
Vireo olivaceus. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 71. AUDUBON, fol. pl. 150; Orn. Biog. Vol. 2, p. 287, and Vol. 5, p. 430.
Red-eyed Greenlet. RICHARDSON, F. B. A. Vol. 2, p. 233. NUTTALL, Vol. 1, p. 312, figure. AUDUBON, B. of A. Vol. 4, p. 155, pl. 242. *Vireosylvia id.* BONAPARTE, List.
Red-eyed Greenlet. GIRAUD, Birds of Long island, p. 157.

CHARACTERISTICS. Olive green. Crown ash, with a dark marginal line; line over the eye, and all beneath whitish. Irides red. First quill longer than the fifth. Length, $5\frac{1}{2}$ inches.

DESCRIPTION. Bill long and robust, abruptly bent at the tip, distinctly notched. Wings long; second and third quills longest. Tail nearly even or slightly emarginate, extending half an inch beyond the tips of the closed wings.

COLOR. Light olive green above; the head ash-color, with a blackish line on each side: below this is a white line passing through and beyond the eye. Quills dusky white on the inner vanes. Tail brownish; the inner vanes dusky. Beneath whitish, with a yellow tinge on the sides.

Length, 5·5 – 6·0. Alar extent, 9·0 – 9·5.

In the young, the deep line over the eye is not apparent, and the eye is dark hazel. I have figured (pl. 34) a remarkable variety in the Cabinet of the Lyceum, in which the whole upper parts are mottled green and ash, and the lower parts ashen grey with a faint tinge of greenish.

The *Red-eyed Greenlet* ranges from Mexico to the 55th degree of north latitude. It winters also in Florida. It reaches us in the latter part of April, and breeds throughout the State. The eggs are white, sprinkled with brownish black points. It feeds on insects, and, later in the season, on seeds and berries. A common species. Migrates south from this State in the beginning of October.

(*EXTRA-LIMITAL.*)

V. bartrami. (Aud. B. of A. Vol. 4, pl. 242.) Yellowish olive. Head deep grey margined with blackish, and beneath it yellowish white. First quill shorter than the fifth. Length, 4½ inches. *Kentucky, New-Jersey.*

V. longirostris. (Richardson. F. B. A. Vol. 2, p. 237.) Chin margined by a black line. Bill elongated. Wings short, not reaching to half the length of the tail: first quill shorter than the fourth. Length, 5½ inches. *Antilles.*

V. belli. (Aud. B. of A. Vol. 7, p. 333, pl. 485.) Greyish olive. Sides and beneath tinged with yellow. Head and shoulders tinged with grey. Wings and tail brown, edged with yellowish. Third quill longest. Length, 4·6. *Upper Missouri.*

GENUS ICTERIA. Vieillot.

Bill stout, elongated, convex, curved, entire, with small divergent bristles at the base. Mandibles subequal; the edges somewhat bent inwards. Nostrils half closed by an arched membrane. Tongue cartilaginous, bristly at the tip. Inner toe free. Wings rounded: third and fourth primaries longest; the first scarcely longer than the sixth.

Obs. This is an exclusively American genus, thus far comprising but one species. The name is perhaps objectionable on account of its resemblance to *Icterus;* but as the species on which it was founded has been figured already in five different genera, and as it has been generally received by modern ornithologists, it will not in all probability be further disturbed. Its place in the systems has also been exceedingly doubtful, and often changed. In the most recent systems, it connects the Flycatchers with the Greenlets, but it also forms the passage between Merula and Vireo. Its most natural position would seem to be in the abnormal group of *Conirostres*, comprising Pyrrhula, Loxia, &c.

THE YELLOW-BREASTED CHAT.

ICTERIA VIRIDIS.

PLATE XXXII. FIG. 71.

(STATE COLLECTION.)

Muscicapa viridis, GMELIN. *Chattering Flycatcher*, PENNANT, Arct. Zool. Vol. 2, p. 385.
Garrulus australis, BARTRAM, p. 290. *Icteria dumicola*, VIEILLOT, Ois. de l'Am. pl. 55.
Pipra pollyglotta. WILSON, Orn. Vol. 1, p. 90, pl. 6, fig. 2.
Icteria viridis. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 69. AUDUBON, fol. pl. 137; Orn. Biog. Vol. 2, p. 223, and Vol. 5, p. 433.
Yellow-breasted Icteria. NUTTALL, Man. Orn. Vol. 1, p. 299.
I. polyglotta. RICHARDSON, F. B. A. Vol. 2, p. 157.
Yellow-breasted Chat. AUDUBON, B. of A. Vol. 4, p. 160, pl. 244 (male and female). GIRAUD, Birds of Long island, p. 162.

CHARACTERISTICS. Greenish olive. Throat and breast yellow. Belly and line around the eye white. Length, 7 inches.

DESCRIPTION. Bill typical, subcarinate between the nostrils, 0·7 in length from the rictus. Tail three inches long, rounded, and extending 2·2 beyond the tips of the closed wings; the inner vanes of the feathers attenuated so as to render them acuminated. Hind claw largest.

COLOR. Deep olive green above. Inner webs of the quills and tail-feathers brownish; outer webs olive. Frontlet occasionally deep slate. Lores, and a line under the eye black. Chin margined on each side by a short white line, which occasionally consists of a series of white points. A line of white from the nostrils, encircling the eye, and extending beyond it. In the adult, the breast is of a rich orange-yellow, passing into lemon-yellow beneath. Abdomen and under tail-coverts white. *Female*, scarcely differing from the male, except in having the black and white adjacent to the eye less pure.

Length, 6·0 – 7·0. Alar extent, 8·5 – 9·0.

This bird, which attracts general attention whenever seen, by the oddity of its motions and its singular notes, arrives from the tropical regions of America, in the southern part of this State (where it is common), in the early part of May, and scarcely advances farther north along the Atlantic. It is not uncommon in the Western States, and has been noticed by Mr. Say near the Rocky mountains, among the sources of the Arkansas river. I cannot state from my own observation that it breeds in this State, although it is extremely probable. It lays 4 – 6 light flesh-colored eggs, spotted with reddish brown. Feeds on beetles, and berries of various kinds. It is among the earliest of the birds which leave us; taking its departure about the middle of August.

FAMILY LANIIDÆ.

Bill robust, convex above, much compressed at the sides, abruptly bent and deeply notched. Claws much curved and very acute. Plumage soft and blended. Carnivorous or insectivorous.

GENUS LANIUS. Linnæus. Bonaparte.

Bill straight from its origin, with advancing bristles at its base. Upper mandible rounded above, notched, hooked and acute at the tip; the lower likewise notched, and also toothed at the tip. Nostrils basal, lateral, oval, half closed by a membrane. Tarsus rather short, compressed, slender, with eight scutellæ; shorter than the middle toe. First quill very short; third and fourth longest.

THE NORTHERN BUTCHER-BIRD.

Lanius septentrionalis.

PLATE XXXVII. FIG. 81 (Male).

(STATE COLLECTION.)

Lanius septentrionalis, Gmelin. *L. borealis*, Vieillot, Vol. 1, p. 89, pl. 50.
L. excubitor. Wilson, Am. Orn. Vol. 1, p. 74, pl. 5, fig. 1 (male).
L. borealis. Bonaparte, Obs. No. 33.
L. septentrionalis. Id. Ann. Lyc. N. Y. Vol. 2, p. 72.
L. excubitor. Audubon, folio, pl. 192.
L. semptentrionalis. Nuttall, Man. Orn. Vol. 1, p. 258, figure.
L. borealis. Richardson, F. B. A. Vol. 2, p. 111, pl. 33 (female). Audubon, B. of A. Vol. 4, p. 130, pl. 236 (male, female and young).
Nine-killer. Heckewelder, Am. Phil. Soc. Vol. 4, p. 124. Peabody, Birds of Mass. p. 291.
L. borealis. Giraud, Birds of Long Island, p. 155.

Characteristics. Light slate; beneath white, undulated with pale brown. Wings, tail, and eye-stripe black. Outer tail-feathers entirely white. *Female*, with the eye-stripe obscure. *Young*, greyish drab: four of the middle tail-feathers wholly black. Length, 10 inches.

Description. Bill compressed, with a stout abrupt tooth on the upper mandible, with strong bristles at the corners of the mouth, and the oval nostrils are concealed by bristly hairs. Wings moderate: fourth quill longest; the third slightly shorter; the first half the length of the second. Tail wedge-shaped, an inch and a half longer than the tips of the wings.

Color. Light ash-grey above, with a slight tinge of bluish. Bill bluish at the base, darker

towards the tip. Sides of the head whitish, with a broad deep black stripe passing from the nostrils through the eye, and on the sides of the neck. Wings black, with a spot or bar of white on the primaries just below the wing-coverts; edges and tips of secondaries and coverts whitish. Tail with the outer webs of the lateral feathers, and a part of its inner web from the tip, white; tips of the remaining tail feathers, except the middle pair, white. Breast and sides with undulating bars of grey. *Female*, light rusty brown above; tail black, with a light border. *Young*, pale ochreous beneath.

Length, 10·0 – 10·5. Alar extent, 14·0.

This bold and ferocious little bird, which is usually known as the *Butcher-bird*, is found at all seasons of the year in this State, where it breeds, laying 4 – 6 pale ashy white eggs, thickly marked at the larger end with reddish spots and streaks. From its attempts to imitate the notes of other birds, it is sometimes called *Mocking-bird* in Canada and the Eastern States. The name of *Nine-killer* is derived from the popular belief that it catches and impales nine grasshoppers in a day. It is exceedingly destructive, waging war upon all birds, and destroying even large ones with great ease. It breeds from Pennsylvania northward, but is found in the winter still farther south. It is found as far north as the 60th parallel of latitude.

(*EXTRA-LIMITAL.*)

L. ludovicianus. (Aud. B. of A. Vol. 4, p. 135, pl. 237.) Dark slate; beneath white. Frontlet, wings and tail black. Four middle tail-feathers black; the others partly white. Third quill longest. Length, 8·0. *North-Carolina, Mexico.*

L. excubitorides. (Rich. F. B. A. p. 115, pl. 34.) Deep pearl-grey; beneath white unspotted. Bill, frontlet and eye-stripe black. Wings short. Tail narrow, wedge-shaped, black with a white border. An *var.? Northern regions.*

L. elegans. (Id. Ib. p. 122.) Clear bluish grey; beneath unspotted white. Frontlet of the same color with the head. A broad white band across the wing. Second primary longer than the sixth; fourth longest. Tarsus longer than the bill. *Northern regions.*

FAMILY CORVIDÆ.

Bill robust, nearly straight, compressed, convex; the edges sharp with a slight sinus: base with incumbent porrect feathers. Nostrils basal, roundish, patulous, covered by reversed slender feathers. Tongue acute and bifid at the tip. Tarsus compressed, with about eight large scutellæ. Toes separated almost to the base. Claws rather large, acute, canaliculate beneath. Wings subelongated. Tail of twelve broad feathers.

GENUS GARRULUS. Brisson.

Head with erectile feathers. Bill rather short, straight, rather compressed, pointed. Nostrils basal, elliptical. Wings rather short: first quill very short; fourth and fifth longest. Tail long, rounded, almost cuneate. Colors brilliant, with more or less of blue.

THE BLUE JAY.

Garrulus cristatus.

PLATE XXV. FIG. 54.

(STATE COLLECTION.)

Coræus cristatus, Linnæus. Pennant, Arct. Zoology, Vol. 2, p. 249. Wilson, Am. Orn. Vol. 1, p. 11, pl. 1, fig. 1. Bonaparte, Ann. Lyc. N. Y. Vol. 2. p. 58. Nuttall, Man. Orn. Vol. 1, p. 224, figure. Audubon, fol. pl. 102; Birds of Am. Vol. 4, p. 110, pl. 231. Peabody, Birds of Mass. p. 287.

Cyanocorax id. Bonaparte, Geog. and Comp. List. p. 27.

Garrulus cristatus. Giraud, Birds of Long island, p. 153.

Characteristics. Blue: head much crested; beneath whitish, with a black collar. Wings, coverts and tail transversely barred with black. Length, 12 inches.

Description. Feathers of the head elongated, oblong, rising into a high crest. Tail long, wedge-shaped.

Color. Above light purplish blue. A narrow line of black runs along the frontlet, rising on each side higher than the eye, but not extending over it. Mouth, tongue, bill, legs and claws black. Chin, cheeks, throat and belly white, with faint bluish. Wings and tail rich blue, barred with transverse curves of black; each feather of the tail, except the two middle ones, tipped with white. A band round the neck, black. Irides hazel.

Length, 11·0 – 12·0. Alar spread, 14·0.

This familiar and elegant bird is common throughout the United States. It lays four or five dull olive eggs spotted with brown. It is excedingly mischievous; but as it rarely appears except in small numbers, its injuries are of little moment. It feeds on chesnuts, acorns, corn, cherries, large insects, caterpillars, and in times of scarcity has been known to feed on carrion. It is also fond of the eggs of the smaller birds, and will not hesitate to devour the callow young. It is found from Texas to the 56th parallel of north latitude. In this State, it is observed throughout the year.

THE CANADA JAY.

GARRULUS CANADENSIS.

PLATE XXV. FIG. 55 (YOUNG).

(STATE COLLECTION.)

Corvus canadensis. LINNÆUS.
Cinereous Crow. PENNANT, Arct. Zool. Vol. 2, p 248. WILSON, Am. Orn. Vol. 3, p 33, pl. 21, fig. 1. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 58. AUDUBON, fol. pl. 107. NUTTALL, Man. Orn. Vol. 1, p. 232.
Whiskey Jack. RICHARDSON, F. B A. Vol. 2, p. 295.
G. brachyrhynchus. ID. p. 296, pl. 55 (young). AUDUBON, B. of A. Vol. 4, p. 121, pl. 234. *Perisoreus*, BONAPARTE, Geog. and Comp. List, p. 26.

CHARACTERISTICS. Back leaden grey; hind head black; forehead, collar and tip of the tail dusky white. Plumage loose. Length, ten to eleven inches.

DESCRIPTION. Bill short and robust: upper mandible curved and notched at the tip; lower mandible shorter, nearly straight, and slightly emarginate near the tip. Feathers at the base of the bill porrect, rigid, concealing the nostrils. The color is subject to many variations, but the usual appearance in this State is as follows: Summit of the head and nape black, forming a sort of hood. Frontlet and collar dingy white. Breast and belly light plumbeous brown, with a faint reddish tinge. Back deep plumbeous. Primaries and tail tipped with dingy white. In the young, the uniform color, except the end of the tail-feathers, is a deep dingy brown; in the adult, the under parts are drab.

Length, 10·0 – 11·0. Alar spread, 15·0 – 15·5.

This may be considered as a rare bird in this State, except in the northern districts, where it undoubtedly breeds. I saw them at the sources of the Saranac, in June, where they appeared to be numerous. The eggs are light grey, faintly streaked with brown. It has occasionally been driven by the severity of winter, or scarcity of food, as low down as the neighborhood of New-York. Its food consists of berries, caterpillars, eggs of other birds, and even carrion, from whence it derives one of its popular names of *Carrion-bird*. Its present ascertained range westwardly is across the continent to the Pacific ocean, and along the Atlantic from Philadelphia to the 68th parallel.

(*EXTRA-LIMITAL.*)

G. stelleri. (AUD. Vol. 4, pl. 230.) Crested. Blue: head and neck blackish; feathers on the forehead tipped with blue; secondaries and tail-feathers slightly barred with black. Tail long, rounded. Length, 12 – 14 inches. *Mexico, Northwest Coast.*

G. floridanus. (AUD. Vol. 4, pl. 233.) Not crested. Back light yellowish brown. Head, wings and tail bright azure blue; beneath greyish. Tail wedge-shaped. Length, 11 – 12 inches. *Florida, Western States.*

G. ultramarinus. (Id. Vol. 4, pl. 232.) Not crested. Tail long, rounded. Head, wings and tail blue. A white band over the eye. Neck streaked with dusky. Length, 12 inches. *Columbia river.*

G. bullocki. (Id. Vol. 4, pl. 229.) Much crested. Glossy blue. The two central tail-feathers curved, and much longer than the others: four outer feathers of the tail tipped with white. Length, 31 inches. *Columbia river.*

GENUS PICA. Brisson.

Head-feathers not erectile. Tail very long, wedge-shaped. Wings moderate, much rounded. Colors generally white and black, sometimes variegated.

THE MAGPIE.

Pica caudata.

PLATE XXIV. FIG. 53.

(CABINET OF THE LYCEUM.)

Corvus pica, Linnæus. *Pica caudata*, Ray.
Magpie. Pennant, Arct. Zool. Vol. 2, p. 247.
Corvus pica. Wilson, Am. Orn. Vol. 4, p. 75, pl. 35, fig. 2. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 57. Nuttall, Man. Orn. Vol. 1, p. 219, figure.
C. hudsonius. Sabine, Frank. Journey.
C. pica. Richardson, F. B. A. Vol. 2, p. 292. Audubon, fol. pl. 357.
C. melanoleuca. Audubon, B. of A. Vol. 4, p. 99, pl. 227.
C. hudsonica. Bonaparte, Comp. List, p. 27.

Characteristics. Deep glossy black. Belly, primaries on the inner web, and scapulars white. Tail long, greenish black, with bronzed reflections. Length, 18 inches.

Description. Tail very long (equalling ten inches), wedge-shaped; the two exterior feathers scarcely half the length of the longest; the others increasing in length towards the two middle ones, which taper towards their extremities. Nostrils covered with a thick tuft of recumbent hairs. First quill very short and narrow; the fourth and fifth longest.

Color. Head, neck, back and fore part of the breast black. Scapulars and inner webs of primaries white. Coverts green and blue. Breast and sides pure white. Tail bright green, blending into purple and bluish towards the tips. Legs and tail-coverts black.

Length, 18·0 – 19·0. Alar spread, 22·0.

This species is very rare in this State, and has never been seen except in the western district near Niagara. The eggs are pale blue or green, freckled with reddish. It feeds on worms, grubs, young birds, eggs and carrion. It has been noticed in Texas, Louisiana, Arkansas, Missouri, and the high northern latitudes to the 58th parallel. Some ornithologists have considered it as distinct from the common Magpie of Europe; but upon carefully comparing the two, I can find no greater differences than may be found among two individuals of any other species.

(*EXTRA-LIMITAL.*)

P. nuttalli. (Aud. B. of A. Vol. 4, pl. 228.) Black, tinged with brown; head green; tail green. Bill and space beneath the eyes yellow. Length, 18 inches. *California.*

GENUS CORVUS. Linnæus.

Bill thick, straight at the base, curved at the tip, and compressed and edged at the sides; the lower mandible shortest. Nostrils basal, lateral, rounded, covered by advancing hair-like feathers. Claws strong, arched, compressed, acute. Wings long, acute; the first quill short, the fourth longest. Tail moderate, rounded.

THE COMMON CROW.

Corvus americanus.

PLATE XXIV. FIG. 52.

Carrion Crow. Pennant, Arct. Zool. Vol. 2, p. 246.
Corvus corone. Wilson, Am. Orn. Vol. 4, p. 79, pl. 36, fig. 3. Bonaparte, Ann. Lyc. Vol. 2, p. 56. Nuttall, Man. Orn. Vol. 1, p. 209.
C. americanus. Audubon, folio, pl. 156; Birds of A. Vol. 4, p. 87, pl. 225. Peabody, Birds of Mass. p. 287. Giraud, Birds of Long island, p. 151.

Characteristics. Black and glossy, with violet reflections. Tail slightly rounded, extending but little beyond the wings. Tail-feathers somewhat acute. Length, 17 inches.

Description. There is so much uniformity in the characters of this species, that its description is almost entirely comprised in the characteristic phrase. We may add, however, that the undersides of the wings and tail are brownish black. *Young* and *female* dull brownish black, with the reflections of the plumage less brilliant. Irides hazel. Variegated or black and white crows are occasionally seen.

Length, 16·0 – 17·5. Spread, 35·0 – 37·0.

The American species is supposed to differ from the common Carrion Crow of Europe, by its smaller size, different voice, gregarious habits, and shape of its tongue. They are for the most part constant residents in this State, but are less numerous in the northern and western districts, where they meet their powerful and unrelenting enemy, the Raven. Whenever the Crow appears, he is treated as a nuisance, and among the earliest laws passed in this State was one offering a reward for his head. Nothing escapes his rapacity. In the spring, when the farmer commences ploughing, the crow may be seen following in the furrows, picking up worms and the larvæ of insects; but here his useful services terminate. No sooner is the seed in the ground, than he commences digging it up and devouring it. He snatches up and devours young chickens, turkies and goslings; dstroys every egg within his reach; and when the indian corn has commenced ripening, he attacks it with unceasing activity. Various means have been devised to extirpate this public pest, but his natural sagacity generally contrives to elude them all. To preserve the corn, it is usual to stir the seed in tar, and afterwards to roll it in gypsum, ashes or lime. The crow pulls up a few seeds, and finding them disagreeable, abandons the field. To preserve young broods of chickens, it is customary with some farmers to raise the guinea-fowl, whose unusual appearance and discordant cries frighten the crow. To protect the corn in the ear, various devices are employed, such as stuffed figures of men; nets and lines suspended across the field; miniature windmills with clappers attached, which make an incessant noise. Poisoning has been resorted to, but few are destroyed in this way. The seeds may be steeped in hellebore before planting, and lately a solution of strychnine has been recommended for the same purpose. A dead crow hung up in a cornfield frequently serves to prevent their approach; but the most efficacious mode I have seen adopted, is to keep a low smouldering fire in the field. On the coast of Long island, we have observed the crow to come with instinctive exactness to the seashore at low-water, and to retreat to the interior with the rise of the tide. One of the best papers on the habits of this bird is to be found in a small volume by Dr. Godman,* to which we recommend the reader.

The *Crow* ranges and breeds from Texas to 74° north latitude. With us, it commences building its nest in the beginning of April; the eggs are brownish, tinged with green, with spots and dashes of dark brown.

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* Rambles of a Naturalist, Philad. 8vo.

THE RAVEN.

Corvus corax.

PLATE XXIV. FIG. 51.

Corvus corax, Lin. Wilson, Am. Orn. Vol. 9, p. 113, pl. 75, fig. 3. Bonaparte, Ann. Lyc. Vol. 2, p. 56. Nuttall, Man. Orn. Vol. 1, p. 102. Audubon, folio, pl. 101. Emmons, Cat. Mass. p. 9. Doughty, Cab. Nat. Hist. Vol. 1, p. 273, pl. 21. Richardson, F. B. A. Vol. 3, p. 290.
C. catototl. Bonaparte, Comp. List, p. 28. Audubon, Birds of Am. Vol. 4, p. 78, pl. 224.
C. corax, The Raven. Giraud, Birds of Long island, p. 149.

Characteristics. Black. Back glossed with bluish purple. Feathers of the throat and breast loose and long. Tail much rounded; third primary longest. Larger than the preceding. Length, 26 inches.

Description. The same remark made in reference to the characters of the Common Crow, will apply to this species; the strongest diagnostic character being limited to the specific phrase. The nasal feathers are half the length of the bill; the feathers of the breast elongated, lanceolate and prominently pendant. Bill notched near the tip.

Color. Bluish purple with greenish tints, less glossy beneath. Bill and feet black. Irides dark chesnut brown. *Young*, frequently pied white and black.

Length, 25·0 – 26·0. Alar spread, 50·0.

This species is rare in this State, except in the northern district, where I have noticed it to be common, and where it breeds. The eggs are greenish blue, with blotches of light purple and yellowish brown at the larger end. It is omnivorous, feeding on grain, field-mice, grubs and worms. It is considered by most ornithologists to be common to Europe and America, although Wagler and Bonaparte treat it as a distinct species. It occurs from the Polar sea to Mexico, rarely appearing in the Atlantic States near the seashore. Mr. Giraud states that a few occur on the seacoast of New-Jersey, and that it is occasionally seen soaring in wide circles over the shores of Long island.

THE FISH CROW.

Corvus ossifragus.

Corvus ossifragus. Wilson, Am. Orn. Vol. 5, p. 27, pl. 37, fig. 2. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 57. Nuttall, Man. Orn. Vol. 1, p. 216. Aud. fol. pl. 145; B. of A. Vol. 4, p. 94, pl. 226.

Characteristics. Glossy black, with violet reflections. Chin naked. Tail slightly rounded, reaching more than an inch beyond the wings: fourth primary longest; the first much shorter than the ninth. Length, 16 inches.

Description. Upper mandible notched near the tip; the edges of both turned inwards about the middle. Eyes small; the recumbent bristly feathers large and long. Ear-feathers prominent. Claws black, sharp and long; the hind one largest.

Color. Bill, legs and claws jet black. *Female,* dull brownish black beneath. Irides dark hazel.

Length, 15·0 – 16·0. Alar spread, 30·0 – 33·0.

This is a rare bird in our State, although they are said to breed along the seacoast of New-Jersey. They are occasionally seen on the shores of Long island, but are usually confounded with the Common Crow. It is a southern species along the Atlantic, but appears on the Pacific as far as Columbia river.

(*EXTRA-LIMITAL*)

Genus Nucifraga, *Brisson.* Bill long, stout, conical, compressed, slightly depressed at the tip; the edges sharp and overlapping, without notch. Nostrils basal, rounded, covered with bristly feathers. No bristles at the base of the upper mandible. Wings long, rounded. The first quill very short; the fourth longest. Tail moderate, rounded.

N. columbiana. (Aud. B. of A. Vol. 4, pl. 235.) Brownish grey. Wings and two middle tail-feathers shining bluish black: secondaries white at tip; outer tail-feathers white. Length, 13 inches. *Oregon Territory.*

FAMILY QUISCALIDÆ.

Bill conic, elongate, stout, straight, entire. Nasal sinus short and wide. Outer and middle toes adherent at the base. Tail various, of twelve feathers.

GENUS QUISCALUS. Vieillot.

Bill as long as the head, compressed from the base, entire. Upper mandible curved from the middle, with a long keel within. Nostrils basal, oval, half closed by a membrane. Tongue cartilaginous, lacerated at the sides, and cleft at the tip. Tarsus as long as the middle toe and claw. Wings moderately long; the first quill equal to the fifth, and shorter than the second and third, which are longest. Plumage glossy.

THE COMMON CROW BLACKBIRD.

Quiscalus versicolor.

PLATE XXIII. FIG. 49.

(STATE COLLECTION.)

Gracula quiscala, Linnæus, p. 165. *Purple Grakle*, Pennant, Arct. Zool. Vol. 2, pp. 263 and 265.
G. quiscala. Wilson, Am. Orn. Vol. 3, p. 44, pl. 21, fig. 4.
G. barita. Ord, Ac. Sc. Vol. 1, p. 253.
Quiscalus versicolor. Vieillot, Nouv. Dict. Vol. 28, p. 498; Gal. des Ois. pl. 108. Bonaparte, Am. Orn. Vol. 1, p. 52, pl. 5, fig. 1 (female). Audubon, folio, pl. 7. Nuttall, Man. Orn. Vol. 1, p. 194. Richardson, F. B. A. Vol. 2, p. 285. Audubon, B. of Am. Vol. 4, p. 58, pl. 221. Peabody, Birds of Mass. p. 285.
Q. id., Purple Grakle. Giraud, Birds of Long island, p. 145.

Characteristics. Glossy black. Tail much rounded, reaching nearly three inches beyond the wings. Bony keel within the bill large. *Female*, resembling the male, but less brilliant. *Young*, brown. Length, 12 – 13 inches.

Description. Bill sinuous on the margin. Tail long and rounded. Plumage of the male glossy; the head, neck and front of the breast blackish, with metallic, violet, steel-blue and green. Back, rump and belly with coppery hues. Wings and tail black, with green and bluish reflections.

Length, 12·0 – 13·0. Alar spread, 18·0 – 19·0.

The *Common Crow Blackbird* is well known, and dreaded by our farmers for its attacks on the indian corn. They appear with us about the second week in April; but from causes not yet understood, they seem to have abandoned certain districts where they formerly appeared in great and destructive numbers. In the southern or Atlantic district of this

State, they are, for instance, far less numerous than they were fifteen or twenty years ago. They breed in every part of the State, laying five or six dull green eggs blotched with dark olive. Their food consists of grubs, caterpillars, moths, beetles, and grain of various kinds. They are found from the Gulf of Mexico to the 57th parallel of north latitude. They are constant residents in the Southern States.

THE RUSTY CROW BLACKBIRD.

Quiscalus ferrugineus.

PLATE XXIII. FIG. 50.

(STATE COLLECTION.)

Rusty Oriole. Pennant, Arct. Zool. Vol. 2, p. 260.
Gracula ferruginea. Wilson, Am. Orn. Vol. 3, p. 41, pl. 21, fig. 3. *Pendulinus ater,* Vieillot.
Q. ferrugineus. Bonaparte, Ann. Lyc. Vol. 2, p. 55. Audubon, folio, pl. 147.
Rusty Blackbird. Nuttall, Man. Orn. Vol. 1, p. 199. *Scolicophagus,* Richardson, F. B. A. Vol. 2, p. 286. Audubon, B. of Am. Vol 4, p. 65, pl. 222. Peabody, Birds of Mass. p. 286.
Q. ferrugineus, Rusty Grakle. Giraud, Birds of Long Island, p. 146.

Characteristics. Glossy black, more or less rusty. Tail slightly rounded. *Female,* brownish black; belly and rump inclining to ash. Length, 9½ inches.

Description. Bill comparatively slender: both mandibles even; the lower slightly curved down at the tip. Tail about two inches longer than the tips of the closed wings.

Color of the male in full plumage, glossy black with bluish reflections, but more frequently intermixed with rusty brown. *Female,* with duller plumage, and a lightish line over the eye; lores and ear-feathers dark brown or black. *Young,* dusky brown.

Length, 9·0 – 9·5. Alar spread, 14·0 – 14·5.

The *Rusty Blackbird* has the same habits with the preceding, but is not, at least in this State, so numerous. It appears in this vicinity about the middle of April, and leaves us in November and occasionally as late as January. Their eggs are light blue, spotted and streaked with brown and black. Their food is the same with that of the preceding species. It is not known whether they breed in this State, but it is probable that they do in the northern district, for according to Audubon they breed in Maine and farther north. Their geographical range extends from 24° to 68° north.

(*EXTRA-LIMITAL.*)

Q. major. (Aud. B. of Am. Vol. 4, p. 52, pl. 220.) Glossy black. Tail wedge-shaped, reaching nearly five inches beyond the wings. Bony keel small. *Female,* light brown beneath. Length, 16 inches. *Southern States.*

Q. breweri. (Aud. B. of Am. Vol. 7, p. 345, pl. 492.) Glossy black. Head, cheeks and sides of the neck with purple reflections. Length, 10·0. *Upper Missouri.*

GENUS STURNELLA. Vieillot.

Bill lengthened, almost straight, depressed towards the tip; edges sharp, the upper overlapping. Upper mandible somewhat rounded above; frontal sinus deep, rounded. Nostrils oval, half closed by a corneous membrane above. Tarsus and middle toe subequal; lateral toes nearly equal; hind nail longest and largest. Upper eyelid margined with strong bristles. Wings broad, moderate: second and third quills longest, first and fifth subequal; two of the inner secondaries nearly as long when the wing is closed. Tail of twelve acute feathers. Tongue narrow, sharp and bifid at the tip.

THE MEADOW LARK.

STURNELLA LUDOVICIANA.

PLATE XIX. FIG. 42.

(STATE COLLECTION.)

Sturnus ludovicianus, Lin. *Crescent Stare*, Pennant, Arct. Zool. Vol. 2, p. 230.
Alauda magna. Bartram, p. 290 (bis).
Meadow Lark. Wilson, Am. Orn. Vol. 3, p. 20, pl. 19, fig. 2 (male).
Sturnella ludoviciana. Bonaparte, Ann. Lyc. Vol. 2, p. 50. Nuttall, Man. Orn. Vol. 1, p. 147. Audubon, Birds of Am. Vol. 4, p. 70, pl. 223.
The Crescent Meadow Starling. Giraud, Birds of Long island, p. 147.

Characteristics. Beneath, and line over the eye, yellow: a black crescent over the breast. Four lateral tail-feathers white. Length, 11 inches.

Description. Body above brown varied with chesnut, deep brown and black. Summit of the head dark brown, with a cream-colored stripe: a yellow stripe over the eye, passing into cream-color behind. Sides of the head and neck greyish white. Flanks, thighs and vent pale rufous brown, spotted with black. Neck and breast of a bright yellow, with a large crescent of black. Upper mandible brown; the lower bluish white. Tail wedge-shaped; the feathers pointed; the four outer ones nearly all white; the others brown, with interrupted bars of white. Legs and feet pale flesh-color.

Length, 10·5 – 11·5. Alar spread, 15·0 – 16·0.

The common *Meadow Lark* is well known, and is found in all parts of the State. I have seen them in the Atlantic district of the State during every season of the year. It breeds here, laying 4 – 5 white eggs with numerous reddish brown spots at the larger end. I have never seen the nest, but Audubon describes it as resembling an oven. In Virginia it is called the *Oldfield Lark*. Although frequently shot by young sportsmen, its flesh is rank and ill-flavored. In this State it does no injury, living on seeds and various insects: indeed it merits the protection of the law, although farther south it is charged with pulling up the seeds of wheat, rye and rice. It ranges from Mexico to the 56th degree of north latitude.

GENUS ICTERUS. Auctorum.

Bill slightly shorter than the head, conical, slightly bent towards the tip. Nostrils elliptical. The four outer quills nearly equal. Frontal sinus acute, not deep. Construct pensile nests.

THE GOLDEN ORIOLE.

Icterus baltimore.

PLATE XX. FIG. 43 (Male). FIG. 44 (Female).

(STATE COLLECTION.)

Oriolus baltimore, Linnæus, p. 162. *Icterus*, Brisson.
Baltimore Oriole. Pennant, Arct. Zool. Vol. 2, p. 257, pl. 12.
Yphantes baltimore. Vieillot, Gal. Ois. pl. 87. Wilson, Am. Orn. Vol. 1, p. 23, pl. 1, fig. 3 (male); Vol. 6, p. 83, pl. 53, fig. 4 (female).
Icterus baltimore. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 51. Audubon, fol. pl. 12. Nuttall, Man. Orn. Vol. 1, p. 152. Richardson, Vol. 2, p. 284. Audubon, B. of A. Vol. 4, p. 37, pl. 217.
Baltimore Hangnest. Giraud, Birds of Long island, p. 142.

Characteristics. Orange: head, neck, wings and tail black; lateral tail-feathers yellow at their ends. *Female*, dull yellow; tail yellowish brown. *Young*, brownish yellow. Length, 7 – 8 inches.

Description. Bill entire, very acute. Nostrils naked: lower mandible stouter at the base than the upper. Second and third quills longest; fourth longer than the first. Tail nearly even, slightly rounded, reaching an inch and a half beyond the tips of the closed wings.

Color. The under parts, upper tail-coverts, smaller wing-coverts and rump rich yellow, passing into orange on the breast and sides of the neck. Head, throat, anterior part of the back and hind neck black. Wings black; the ends of the secondary coverts tipped with white, and the outer vanes of the primaries white. Tail black; the feathers tipped with yellow, the external ones for nearly their whole length, gradually diminishing to the central pair. Legs and feet lead-colored. *Female*, yellowish olive. Wings dark brown; the quills margined with whitish. First row of small coverts and secondary coverts largely tipped with white. A space round the eyes light yellowish; the cheeks spotted with dusky. Tail yellowish brown, with obscure dusky bars. *Young*, resembles the female, but is brownish yellow; the back obscurely barred with dusky.

Length, 7·0 – 8·0. Alar spread, 11·0 – 12·0.

The *Oriole*, *Hang-bird*, *Fire Hang-bird*, or *Golden Robin*, for it is known under all these names, is found in the summer season throughout the State, breeding in every part. Its nest is well known, from its being suspended from trees by two or more strings. Its eggs

are bluish white, with pale brown spots and lines. Its food consists chiefly of flies, beetles and caterpillars, and its services in destroying these insects are invaluable. It ranges over the whole Union, from Mexico to 55° north latitude. Is easily domesticated, and imitates the notes of other birds.

THE ORCHARD ORIOLE.

ICTERUS SPURIUS.

PLATE XXI. FIG. 46 (MALE).

(STATE COLLECTION.)

Oriolus spurius. LINNÆUS, Syst. Nat. 12 ed. p. 162.
O. mutatus. WILSON, Am. Ornith. Vol. 1, p. 64, pl. 4, fig. 1 (female); fig. 2 (male of two years); fig 3 (male of three years); fig. 4 (adult male).
Yphantes solitaria. VIEILLOT, Gal des Ois. *Pendulinus nigricollis,* ID. Ib.
Icterus spurius. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 51. AUDUBON, fol. pl. 42.
Orchard Oriole. NUTTALL, Man. Orn. Vol. 1, p. 165. KIRTLAND, Zool. Ohio, p. 162.
Orchard Hangnest. GIRAUD, Birds of Long island, p. 141.

CHARACTERISTICS. Tail long and rounded. Bright chesnut: head, neck, back, wings and tail black. *Female* and *yearling*, yellow olive, inclining to brown above. *Young male* of more than a year, with the throat black. Length, six inches.

DESCRIPTION. Bill conical, acute, slightly curved. Inner and hind toe subequal; claw of the hind toe twice the size of the others. Second and third primaries longest. Tail of twelve feathers, rounded, and an inch and a half longer than the tips of the closed wings. Nostrils oval.

COLOR. Deep bay on the breast, belly, vent, shoulders, under wing-coverts and tail-coverts. Quills and larger coverts black, margined with pale rufous or yellowish. Tail black; a few of the tips of the feathers whitish. *Female and young of the year:* Head and rump bright yellow-olive; back and wings dusky brown; coverts tipped with white: *of the second year*, black on the chin and throat: *third year*, chin blacker; back olive and black; beneath olive mixed with bay.

Length, 6·5 – 7·0. Alar spread, 9·0.

The *Orchard Oriole* is more common than the preceding species in the southern district of this State, where it is seen from May to September, when it migrates southwardly. Its nest does not hang free and pendulous like that of the Golden Oriole, but is firmly attached all around its margin; in other respects, it is interwoven in the same manner: the eggs are bluish white sprinkled with brown. It ranges from the equator to 49° north latitude. Mr. Audubon states that he has seen them in the State of Maine, but they have not yet been noticed in the adjoining State of Massachusetts. It feeds on crickets, grasshoppers, spiders, larvæ of insects, and occasionally on juicy fruits and berries.

THE RED-WINGED ORIOLE.

ICTERUS PHŒNICEUS.

PLATE XXII. FIG. 47 (MALE).

(STATE COLLECTION.)

Oriolus phœniceus, LINNÆUS, p. 161. *Red-winged Oriole*, PENNANT, Arct. Zool. Vol. 2, p. 225.
Sturnus predatorius. WILSON, Am. Orn. Vol. 4, p 30, pl. 30, fig. 1 and 2.
Agelaius phœniceus. VIEILLOT, Ency. Methodique, Vol. 2. p. 714. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 52. AUDUBON, fol pl. 42. RICHARDSON, F. B. A. Vol. 2, p. 280. NUTTALL, Man. Orn. Vol. 1, p. 169. KIRTLAND, Zool. Ohio, p. 162. PEABODY, Birds of Mass. p. 282. AUDUBON, B. of A. Vol. 4. p. 31, pl. 216.
Red-winged Starling, Agelaius pheniceus. GIRAUD, Birds of Long island, p. 141.

CHARACTERISTICS. Black: lesser wing-coverts red. *Young and autumnal male*, feathers edged with ferruginous. *Female*, striate with brown and whitish; lesser wing-coverts blackish tipped with white, or rufous and sometimes spotted with black and red.

DESCRIPTION. Bill conic, straight; the ridge of the upper mandible flattened and obsoletely rugose; the tip depressed, rounded. Second and third quills longest, equal. Tail rounded, an inch and a half longer than the tips of the closed wings. Tongue slender, lacerated at the tip.

COLOR. Upper feathers often edged with bay, and the under tail-coverts tipped with white. *Female:* a line over the eye whitish or reddish brown; chin and throat cream-color. *Young:* sides of the head pale yellowish brown.

Length, 7·5 – 9·0. Alar spread, 10·0 – 14·0.

The *Red-winged Blackbird* is equally well known in every part of the State under the names of *Swamp Blackbird* and *Corn-thief*, and is regarded by the farmer with great aversion; but their beneficial acts in destroying grubs and insects, compensate in a great degree for their known depredations. They appear in the southern district of this State in March or the beginning of April, and leave us in November. Their eggs are light bluish, with scattering brownish spots and streaks especially at the larger end. It breeds from Texas to the Columbia river, and throughout the United States, and is found from Mexico to the 57th degree of north latitude.

(*EXTRA-LIMITAL.*)

I. xanthocephalus. (Bonap. Am. Orn. Vol. 1, p. 27. Giraud.) Black. Head, neck and breast yellow-orange: a white spot on the wing. *Female and young*, dark brown; breast yellow; wing unspotted. Length, 9 inches. *Missouri, Texas.*

I. tricolor. (Aud. B. of A. Vol. 4, p. 27, pl. 214.) Bluish black: smaller wing-coverts carmine; their lower row white. *Female*, unknown. Length, 9 inches. *North-California.*

I. gubernator. (Id. Ib. pl. 215.) Glossy bluish black: smaller wing-coverts scarlet; at the base, white. *Female*, dark brown; throat, and a broad streak over the eye dull orange. Length, nine inches. *Columbia river.*

I. bullockii. (Id. Ib. pl. 218.) Black: back, rump and belly yellow; frontlet, a line over the eye, and sides orange yellow; throat black; four middle tail-feathers black, the others yellow. *Female and young*, olive grey; sides of the head and neck yellow; throat of the latter black. Length, 7 inches. *Columbia river.*

I. auduboni. (Giraud, B. of Tex.) Head, throat, foreneck, wings and tail black: back, rump and upper tail-coverts greenish yellow. Beneath yellow. Tail much rounded. Length, 8·7. *Texas.*

I. vulgaris, Daud. Bill naked; space round the eye and feet blue; head, neck, breast, back, wings and tail black: a patch of white on the wings: rest of the body yellow. Length, 10 inches. *Charleston.*

GENUS MOLOTHRUS. Swainson.

Bill short, stout, conical, moderately compressed. Upper mandible with the dorsal line slightly covex; tip rather acute. Nostrils small, elliptical; the sinus at the base of the bill sharp and shallow. Wings rather long, pointed: the second quill longest; the first almost equal. Tail moderate; its feathers broad and rounded.

THE COW BUNTING.

Molothrus pecoris.

PLATE XXI. FIG. 45.

(STATE COLLECTION.)

Fringilla pecoris, Gmelin. *Brown-headed Oriole*, Pennant, Arct. Zool. Vol. 2, p. 259? Id. Ib. Vol. 2, p, 371.
Sturnus stercorarius. Bartram, p. 291.
Emberiza pecoris. Wilson, Am. Orn. Vol. 2, p. 145, pl. 18, figs. 1, 2, 3.
Icterus (Emberizoides) pecoris. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 53.
Icterus id. Temminck. Audubon, folio, pl. 99. Nuttall, Man. Orn. Vol. 1, p. 178. *F. ambigua*, Id. (young?)
Molothrus pecoris, Sw. Richardson, F. B. A. Vol. 2, p. 277. Peabody, Birds of Mass. p. 283. Kirtland, Zool. Ohio, p. 162. Audubon, B. of A. Vol. 4, p. 16, pl. 212.
M. pecoris, Cowpen-bird. Giraud, Birds of Long island, p. 139.

Characteristics. Glossy black; head and neck deep glossy brown. *Female*, sooty brown. *Young*, similar, but with arrow-headed spots on its breast. Length, 7 inches.

Description. Bill stout; the ridge of the upper mandible flattened: edges sinuous. The three first primaries subequal; the remainder successively graduated. Tail nearly even, slightly rounded, 1·0 – 1·4 longer than the tips of the closed wings.

Color. The black glossed with green, purplish near its junction with the deep glossy drab of the neck. *Female*, smaller than the male, of a uniform dull greyish brown; beneath a shade lighter, and obscurely streaked with pale brown. *Young*, mottled with black and brown: above greyish brown; the tail and primaries darker; the latter faintly edged with white: dusky pointed spots in series on the sides.

Length, 6·5 – 7·0. Spread of wings, 11·0 – 11·5.

The *Cow Bunting*, *Cow Blackbird*, or *Cowpen-bird*, derives its various names from the circumstance of its following cattle in the fields, searching in their droppings for undigested grains and intestinal worms. Like the Cuckoo of Europe, it deposits its eggs in the nests of other birds to be hatched, and, according to the testimony of some writers, never builds a nest of its own: the eggs pale greenish, with olive brown points and confluent blotches, more numerous at the larger end. This species appears in this State about the beginning of April, and leaves us for the South in October. Its food consists of grubs and the hard-shelled insects, maize and other seeds. It has been observed from Mexico to the 68th parallel.

GENUS DOLICHONYX. Swainson.

Bill thick, conical, very robust and acute : upper mandible with the dorsal line straight. Nostrils small, operculate. Wings broad, pointed ; the first quill longest. Tail moderate, with the feathers narrow and acuminated at the tips.

THE BOBLINK.

Dolichonyx oryzivorus.

PLATE XXII. FIG. 48 (Male).

(STATE COLLECTION.)

Emberiza oryzivora, Linnæus, 12 ed. p. 311.
Rice Bunting. Pennant, Arct. Zool. Vol. 2, p. 360. Wilson, Am. Orn. Vol. 2, p. 48, pl. 12, figs. 1 and 2 (male and female). *Passerina id.* Vieillot.
Icterus (Emberizoides) agripinnis. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 53.
Bob-o'link. Nuttall, Manual Orn. Vol. 1, p. 135. Audubon, Orn. Biog. Vol. 1, p. 283, and Vol. 5, p. 486.
Dolichonyx. Rich. & Swainson, F. B. A. Vol. 2, p. 278. Kirtland, Zool. Ohio, p. 162. Peabody, Birds of Mass. p. 234,
D. oryzivorus. Audubon, B. of A. Vol. 4, p. 10, pl. 240.
Rice-bird. Giraud, Birds of Long island, p. 137.

Characteristics. *Adult male* in spring dress, black ; hind head cream-color; scapulars, rump and tail-coverts white tinged with ash. *Female*, *young* and *male* in early autumn and winter dress, varied with brownish black and yellow; beneath dull yellow. Length, seven inches.

Description. The inner webs of the tail-feathers bevelled in a rounded manner ; the three first primaries much longer than the others. Tarsus longer than the middle toe. The spring and summer dress of the male is sufficiently detailed in the specific phrase ; but in autumn he assumes the plumage of the female, which is light yellowish brown, with longitudinal streaks of brownish black ; summit of the head and all beneath dull yellow ; the sides streaked with dusky.

Length, 6·5–7·5. Alar spread, 11·5.

The *Boblink*, or *Bob-o'link* as it is called in this State, is known in others by the various names of *Reed-bird*, *May-bird*, *Meadow-bird*, *American Ortolan*, *Butter-bird* and *Skunk Blackbird*. In the Southern States, where it is highly prized by epicures, it is usually known under the name of *Rice-bird*. It arrives in this State about the first week in May, and returns to the south about the middle or latter part of October. Their northern migration appears to be chiefly by night ; but on their return southwardly, they fly by day. The eggs are of a faint bluish white irregularly spotted with blackish, and placed in a nest on the ground. Their food consists of crickets, grasshoppers, beetles, spiders, and seeds of various kinds, particularly of the grasses. They have been observed on the Rocky mountains, and their geographical range on the Atlantic side of the continent extends from Mexico to the 54th parallel of north latitude.

FAMILY FRINGILLIDÆ.

Bill short, robust, less thick than the head, conic, acute and very slightly curved at the tip; edges generally entire: upper mandible wider than the lower. Nostrils basal, roundish, partly concealed by short bristly feathers. Tarsus compressed, with seven or eight anterior scutellæ, shorter than the middle toe: lateral toes subequal; hind nail longest. Roof of the mouth concave, with three prominent ridges, of which the middle is sometimes elevated into a hard prominence. Tongue compressed, pointed.

GENUS COCCOBORUS. Swainson.

Bill very robust, almost as broad as the head, somewhat compressed, tapering to a point. Upper mandible convex above, smaller than the lower, and with distinct bristles at its base; the edges ascending for a third of their length, then direct; the notches faint.

THE BLUE GROSBEAK.

Coccoborus ceruleus.

PLATE LXIV. FIG. 146.

(STATE COLLECTION.)

Loxia cerulea. Linnæus, p. 306.
Blue Grosbeak. Pennant, Arct. Zool. Vol. 2, p. 351. Wilson, Am. Orn. Vol. 3, p. 78, pl. 24, fig. 6 (male).
Fringilla (Coccothraustes) cerulea. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 114.
F. id. Nuttall, Man. Orn. Vol. 1, p. 529. Audubon, folio, pl. 122. Kirtland, Zool. Ohio, p. 184. Peabody, Zool. Mass. p. 330. Audubon, B. of A. Vol. 3, p. 204, pl. 204.

Characteristics. Deep blue. Lores and frontlet black: wings and tail dusky; the former edged with chesnut. *Female:* Head and hind part of the back blue. *Young*, yellowish brown; lighter beneath. Length, 7·5.

Description. Bill forming a continuous curve with the forehead. Upper mandible broadly notched near the base, and a slight notch near the tip. Second, third and fourth primaries longest, subequal. Tail rounded, nearly even. Middle toe and claw subequal with the tarsus. A few small porrect bristles at the base of the upper mandible. Tail 1·4 longer than the tips of the closed wings.

Color. Brilliant blue. Lores, chin and frontlet black. Wings and tail dusky black; the latter and the quills edged with blue. Wing-coverts edged with chesnut-brown. Lower mandible lightest. Legs dusky. *Female:* Head and posterior part of the back bright blue. Sides and breast tinged with blue. Anterior part of the back brown. Wings and tail dusky; the coverts of the former edged with chesnut. Beneath yellowish brown. *Young*, yellowish brown, tinged with darker brown; rather lighter beneath. Wings and tail dark blackish brown. Length, 6·5 – 7·5. Alar spread, 10·0 – 11·0.

This beautiful but shy and solitary bird is a southern species. It has been rarely observed as far north as Pennsylvania and New-Jersey; in which latter State, Audubon once detected its nest. I think it highly probable that it will be found to breed in this State; for Mr. Benjamin Moore killed the specimen which has furnished me with the preceding description and figure, on the 15th May, 1838, on Manhattan island, a few miles from the city. Its food consists of rice and seeds, and kernels of the hardest kinds. It breeds from Texas to New-York, and has been observed on the Rocky mountains.

THE ROSE-BREASTED GROSBEAK.

Coccoborus ludovicianus.

PLATE LXIV. FIG. 147.

(STATE COLLECTION.)

Loxia ludoviciana. Linnæus, p. 306.
Red-breasted Grosbeak. Pennant, Arct. Zool. Vol. 2, p. 350.
Spotted do. Id. Vol. 2, p. 350 (female), and p. 372.
Loxia rosea (ludoviciana). Wilson, Am. Orn. Vol. 2, p. 135, pl. 17, fig. 2 (male).
Fringilla (Coccothraustes) ludoviciana. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 113.
Pyrrhula id. Sabine, Franklin's Journey.
F. id. Bonaparte, Am. Orn. Vol. 2, p. 79, pl. 15, fig. 2 (female). Audubon, fol. pl. 127. Nuttall, Man. Orn. Vol. 1, p. 527.
Coccothraustes (Guiraca) id. Rich. & Swainson, F. B. A. Vol. 2, p. 271. Kirtland, Zool. Ohio, p. 184. Peabody, Birds of Mass. p. 329.
Coccoborus id. Audubon, B. of A. Vol. 3, p. 209, pl. 205.
C. id., Rose-breasted Grosbeak. Giraud, Birds of Long island, p. 133.

Characteristics. Black. Breast and under wing-coverts rosaceous. Abdomen, rump, bands on the wings, and part of three outer tail-feathers white. *Female* and *young*, pale brown; beneath lighter: three white bands on the head: no rose-color. Length, 8 inches.

Description. Upper mandible with obsolete furrows; the tip superficially notched. Tail slightly emarginate and rounded.

Color. Head and upper parts black. Breast and under wing-coverts rose-colored: in front, this rose-color often descends down the centre of the abdomen. The posterior portion of the back, two bands on the wings, base of the quills, tips of the secondaries, and the terminal half of the inner webs of the outer tail-feathers white. *Female* and *young*, dusky olive brown: a white line over the summit of the head; another over the eye, and one beneath. Centre of the breast and under wing-coverts flaxen yellow. Beneath greyish white, spotted with brown more particularly on the breast and flanks.

Length, 7·5 – 8·5. Alar extent, 12·5 – 13·0.

I have noticed this beautiful species in the western and atlantic districts of this State, where it breeds. Its eggs are from four to five, white spotted with brown. Its food consists of grain, berries and insects. Its observed geographical range is from Texas to 56° north latitude. It appears in its northern migration to avoid the Southern States bordering on the sea coast, and extends across the continent.

(*EXTRA-LIMITAL.*)

C. melanocephalus. (Aud. B. of A. Vol. 3, p. 214, pl. 106. Giraud.) Head black: body above and beneath orange-yellow. Most of the inner webs of tail-feathers white. *Female*, brown, with three bands of white on the head; tail unspotted; lower wing-coverts yellow. Length, 8·5. *Rocky Mountains, Texas.*

Genus Coccothraustes, *Brisson.* Bill large, robust, conical, not compressed. Upper mandible rather broader than the lower; the edges simply arched, and a little inflected.

C. vespertina. (Aud. B. of A. Vol. 3, p. 217, pl. 207. Giraud, B. of Tex.) Yellow: front and line over the eye yellow; crown, wings and tail black; secondaries and inner great wing-coverts white. *Young male:* Head and back greyish drab; sides of the neck yellow; abdomen and lower tail-coverts white. *Female*, greyish drab; no yellow frontlet nor line over the eye; tail-coverts black, tipped with white; inner web of tail-feathers white at tip. Length, 8 inches. *Michigan, Missouri, Texas.*

GENUS STRUTHUS. Boie.

Bill small, conical, acute. Upper mandible slightly broadest, straight on the dorsal line; the edges nearly straight: lower mandible with the edges inflected. Nostrils concealed by feathers. Wings short, rounded; the second, third and fourth quills longest. Tail long, emarginate. Palate with the rudiment of a tubercle.

THE SNOW-BIRD.

Struthus hyemalis.

PLATE LX. FIG. 138.

(STATE COLLECTION.)

Fringilla hyemalis, Lin. Syst. Nat.
F. nivalis (hudsonia). Wilson, Am. Orn. Vol. 2, p. 129, pl. 16, fig. 6.
F. (Spiza) hyemalis. Bonaparte, Ann. Lyc. Vol. 2, p. 109. Audubon, folio, pl. 13.
Black Finch. Richardson, F. B. A. Vol. 2, p. 259 (figure of head).
F. hudsonia. Nutt. Man. Orn. Vol. 1, p. 491. Kirtland, Zool. Ohio, p. 183. Peabody, Birds of Mass. p. 324.
Niphea hyemalis. Audubon, Birds of Am. Vol. 3, p. 88, pl. 147.
N. id., Common Snow-bird. Giraud, Birds of Long island, p. 108.

Characteristics. Bluish black: abdomen and lateral tail-feathers white. *Female*, light grey inclining to brown. Length, six inches.

Description. Bill short, stout; the notch on the upper mandible scarcely apparent under the lens: gape-line not extending to beneath the eyes. Third and fourth primaries longest. Tail long, 1·5 longer than the tips of the wings; the lateral tail-feathers slightly curved outwards.

Color. Head, chin and throat leaden black, slightly tinged with grey or brown. Beneath white. Quills with their outer webs white; secondaries edged with brown. The two outer tail-feathers on each side wholly white; the next with a long spot of white. *Female*, light greyish brown, without the blackish head and neck, smaller than the male; outer tail-feathers white.

Length, 5·5 – 6·5. Alar spread, 8·5 – 9·0.

The *Snow-bird* occurs in this State at all seasons of the year. It is a shy timorous bird, and hence is rarely seen except during snow-storms, when it appears in flocks close to dwellings. It is a northern species. It breeds, acording to Dr. Brewer, among the mountains in Oswego county, and doubtless in other parts of the State.* It makes its nest on the ground, and lays about four spherical yellowish white eggs sprinkled with reddish brown dots. It breeds as far south as Virginia. It feeds on grass-seeds, berries, insects and their larvæ.

The Snow-bird migrates in the night from the north, and descends as low as the 30th parallel of latitude. It has been noticed by Dr. Richardson as high as 57° north latitude, where, however, it appears to be only a summer resident. It is common to America and the northern parts of Europe.

(*EXTRA-LIMITAL.*)

S. oreganus. (Aud. B. of Am. Vol. 3, p. 91, pl. 168. Giraud, B. of Tex.) Back dark reddish brown; wings and tail dusky; bill reddish white; neck, head and breast black. *Female:* Head and neck blackish grey; sides pale reddish brown. Length, six inches. *Columbia river, Texas.*

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* Its nests have since been observed in the Catskill mountains, and at Greenbush opposite Albany.

GENUS FRINGILLA. Linnæus.

Bill short, stout, conical, narrower than the head. Mandibles of equal width. Nostrils basal, rounded, concealed by the feathers. Tongue compressed above, channelled lengthwise, horny. Claws various.

THE FOX-COLORED SPARROW.

Fringilla iliaca.

PLATE LXXIII. FIG. 166 (Male).

(STATE COLLECTION.)

Fringilla iliaca. Merrem, Icones Avium, pl. 10.
F. rufa, subsequently *ferruginea.* Wilson. Am. Orn. Vol. 3, p. 53, pl. 22, fig. 4.
F. (Fringilla) iliaca. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 112.
Ferruginous Finch. Nuttall, Man. Orn. Vol. 1, p. 514. Audubon, folio, pl. 108.
F. (Zonotrichia) id. Rich. & Swainson, F. B. A. Vol. 2, p. 257 (figure of the head). Kirtland, Zool. Ohio, p. 164. Peabody, Birds of Mass. p. 328. Audubon, Birds of Am. Vol. 3, p. 139, pl. 186.
Fox-colored Finch. Giraud, Birds of Long Island, p. 119.

Characteristics. Above varied with reddish brown and ash; beneath whitish, with large reddish brown blotches. Wings and tail bright reddish; the latter emarginate. One of the largest of the genus. Length, $7\frac{1}{2}$ inches.

Description. Third primary longest. Hind claws slightly curved, 0·4 long. Tail slightly emarginate, 1·4 longer than the tips of the closed wings.

Color. Above the eyes, and on the sides of the neck, slate. First primary edged with white on the outer vane; the other with rufous: the two white bars on the wings often obsolete. Tail-coverts bright rufous. Beneath, the chin soiled white. Throat, breast and flanks spotted with arrow-heads and oblong dashes of rufous: lower mandible dusky. The female scarcely differs from the male, except that the crown has more slate, and the white wing-bands are absent.

Length, 6·5 – 7·5. Alar extent, 9·5 – 10·5.

This large northern *Finch*, which breeds in the countries north of the United States, appears in this State in October and November on its way south, and returns on its northern passage in the earliest part of spring. Those in the State Collection were obtained in the neighborhood of New-York, on the 12th of October; but in the northern district, they appear earlier, and I suspect will be found to breed even there. They feed on seeds and insects. It builds its nest in the grass, and its eggs are dull greenish, sprinkled with small irregular blotches of brown. They descend as low as 30° south, and have been seen as high north as the 68th parallel. They are abundant about the Columbia river.

This species has been placed by some recent ornithologists in a separate genus *Passarella*.

THE SONG SPARROW.

FRINGILLA MELODIA.

PLATE LXVIII. FIG. 156.

(STATE COLLECTION.)

Fringilla melodia. WILSON, Am. Orn. Vol. 2, p. 125, fig. 4.
F. (Spiza) id. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 108. NUTTALL, Man. Orn. Vol. 1, p. 486. AUDUBON, folio, pl. 25.
Emberiza id. RICH. & SWAINSON, F. B. A. Vol. 2, p. 252. KIRTLAND, Zool. Ohio, p. 164. PEABODY, Birds of Mass. p. 323. AUDUBON, Birds of Am. Vol. 3, p. 147, pl. 189.
Song Finch. GIRAUD, Birds of Long island, p. 121.

CHARACTERISTICS. Crown chesnut, with three longitudinal bluish bands. Breast and flanks streaked with oblong spots of blackish brown. First quill shorter than the second. Tail rounded. Length, six inches.

DESCRIPTION. Hind toe and claw of equal length. Bill very robust. Third and fourth quills longest. Tail rounded, 1·6 longer than the tips of the closed wings; the feathers pointed.

COLOR. Above streaked with red and brown. Crown minutely streaked with black. Line over the eye reddish white; a dark stripe behind the eye. Chin whitish ash, bordered on each side with deep rufous or dusky: another similarly colored line above this, including a light rufous space. Belly and vent white, immaculate. Tail with obsolete dusky bars. *Female,* smaller, and tail more dusky.

Length, 6·2 – 6·5. Spread of wings, 8·5.

This little Sparrow is, with the Bluebird, the earliest harbinger of spring. Indeed, I have reason to believe that a few spend the entire winter in the Atlantic district of this State. Dr. Brewer supposes that two species may have been confounded under one name. The first, or the one figured by Wilson, with the spots generally distributed over the breast, builds its nest in low shrubs a few feet from the ground; the eggs so thickly spotted with brown, that the white ground is scarcely apparent. The other variety, or that figured by Audubon, has the breast less spotted, but a large confluent black blotch on its centre; builds its nest on the ground; the eggs smaller, and the ground color distinct light green, with the spots most crowded at the larger end. This sparrow breeds throughout all the Atlantic States, and has been noticed by Kirtland in Ohio, but does not appear to be so common in the interior. Its chief food consists of insects. It ranges from the 30th to the 50th parallel.

THE BAY-WINGED SPARROW.

FRINGILLA GRAMINEA.

PLATE LXI. FIG. 140.

(STATE COLLECTION.)

Fringilla graminea, GMELIN. *Grass Finch*, PENNANT, Arct. Zool. Vol. 2, p. 375.
Emberiza id. WILSON, Am. Orn. Vol. 4, p. 51, pl. 31, fig. 5.
F. (Spiza) graminea. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 103. NUTTALL, Man. Orn. Vol. 1, p. 482. AUDUBON, folio, pl. 90.
F. (Zonotrichia) id. RICH. & SWAINSON, F. B. A. Vol. 2, p. 254. KIRTLAND, Zool. Ohio, p. 164. PEABODY, Birds of Mass. p. 322.
Emberiza id., Bay-winged Bunting. AUDUBON, B. of A. Vol. 3, p. 65, pl. 159.
E. id. GIRAUD, Birds of Long Island, p. 101.

CHARACTERISTICS. Above, grey varied with dusky. Breast and flanks streaked with brown spots. Lesser wing-coverts bay. The outer tail-feathers partly white. Length, $5\frac{1}{2}$ inches.

DESCRIPTION. Bill feebly notched near the tip. Second and third quills nearly equal. Tail slightly emarginate, 1·2 longer than the tips of the closed wings; its feathers slightly acuminate.

COLOR. Above, the head streaked with dark brown lines, which become more dilated on the interscapulars. Smaller wing-coverts bay, but this is nearly concealed by the feathers of the side of the neck. Wings and tail of the same color with the streaks. Ear-feathers dull chesnut: a narrow soiled whitish circle around the eye. Outer webs of the quills, and tips of the wing-coverts, edged with dull white. The first outer tail-feathers nearly all white; the second with the terminal portion of the outer vane whitish. Two obscure narrow white bands on the wings, formed by the tips of the wing-coverts. Beneath, the chin bluish grey. Breast and flanks dull white, and streaked with dusky. Belly and vent soiled white. Female scarcely differs from the male.

Length, 5·5–6·0. Alar extent, 10·0–10·2.

This familiar sparrow, known in many parts of this State as the *Grass-bird* and *Grey Grass-bird*, is common in the Atlantic district during the whole year. The greater number, however, pass a few of the winter months not farther north than Pennsylvania. The eggs are flesh-colored, with numerous reddish brown blotches, thickest at the larger end: the nest is placed on the ground. Feeds on insects and grass-seeds. It ranges from Texas to the 57th parallel along the Atlantic coast. It has been observed on the Columbia river, and also in the State of Ohio.

THE WHITE-THROATED SPARROW.

FRINGILLA PENNSYLVANICA.

PLATE LXI. FIG. 141.

(STATE COLLECTION.)

Passer pennsylvanicus, BRISSON.
White-throated Finch. PENNANT, Arct. Zool. Vol. 2, p. 372.
F. albicollis. WILSON, Am. Orn. Vol. 3, p. 51, pl. 5, fig. 2 (male).
F. (Spiza) pennsylvanica. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 108. AUDUBON, fol. pl. 8. NUTTALL, Man. Orn. Vol. 1, p. 481.
F. (Zonotrichia) id. RICH. & SWAINSON, F. B. A. Vol. 2, p. 256 (bill). KIRTLAND, Zool. Ohio, p. 164. PEABODY, Birds of Mass. 321. AUDUBON, B. of A. Vol. 3, p. 153, pl. 191.
White-throated Finch. GIRAUD, Birds of Long island, p. 122.

CHARACTERISTICS. Crown with a white longitudinal line, bordered on each side with black: line from the nostril yellow; throat white, with a short black line on each side. *Female:* Crown varied with black and dark bay; sides reddish. Length, six inches.

DESCRIPTION. Bill robust, with a notch near the tip of the upper mandible, most obvious in the female. Third and fourth primaries longest. Tail 1·8 longer than the tip of the closed wings. Hind claw not highly curved.

COLOR. Above varied with rufous and black; rump olive brown. The line over the eye, continuous with the lemon stripe from the nostrils, is white. Cheeks, sides of the neck and breast slate; flanks tinged with rufous. *Female:* Crown deep bay varied with black; dividing line cream-colored; rump rufous; sides of the belly deep reddish drab.

Length, 6·0 – 6·5. Alar spread, 8·5 – 9·0.

This active northern sparrow appears more or less in New-York during the whole year. I have seen them in the heart of winter near the coast; although I believe, with Audubon, that the great bulk do not ascend farther north than Maryland or Pennsylvania until spring. The eggs are pale green, thickly mottled with reddish brown. It feeds on seeds and insects. It ranges from 23° to 66° north. It will probably be found to breed in the northern parts of this State.

THE WHITE-CROWNED SPARROW.

FRINGILLA LEUCOPHRYS.

PLATE LX. FIG. 137 (MALE). FIG. 139 (FEMALE).

(STATE COLLECTION.)

Emberiza leucophrys, GMELIN. PENNANT, Arct. Zool. Vol. 2, p. 355, pl. 16 (male). WILSON, Am. Orn. Vol. 4, p. 49, pl. 31, fig. 4.
F. (Spiza) id. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 107. AUDUBON, fol. pl. 111. NUTTALL, Man. Orn. Vol. 1, p. 479; *ambigua?* ID. (winter plumage?).
F. (Zonotrichia) leucophrys. RICH. & SWAINSON, F. B. A. Vol. 2, p. 255. KIRTLAND, Zool. Ohio, p. 183.
F. id. PEABODY, Mass. Rep. p. 321. AUDUBON, B. of A. Vol. 3, p. 157, pl. 192.
White-crowned Finch. GIRAUD, Birds of Long island, p. 123.

CHARACTERISTICS. Head white; line surrounding the crown, and through the eye, black; beneath pale ash: vent ochreous. *Female:* Crown rufous, somewhat lighter in the centre. Length, seven inches.

DESCRIPTION. Bill acute, very faintly notched near the tip. Third quill longest. Tail nearly even, 1·8 longer than the tips of the closed wings, with its feathers acuminate.

COLOR. Tips of the wing-coverts white, forming two interrupted bars across the wings. Outer webs of the primaries whitish. Interscapular region brown, varied with soiled white. Head white, surrounded by four longitudinal black bands; that through the eye, occasionally interrupted; and, according to Audubon, the white head becomes dusky in winter. *Female:* line over the head and through the eye rufous brown; cheeks light brown; tail beneath obsoletely barred with dusky. *Young:* the head ashen, with the bands greyish brown; beneath yellowish white: at the second moult, the head becomes yellowish brown and the bands darker.

Length, 6·5 – 7·5. Alar spread, 10·0 – 10·5.

This northern sparrow is rather a rare species in this State. The male figured in the plate was shot at Monticello, Sullivan county, in the autumn. Audubon observed them near New-York in May. It breeds north of the United States, although it is possible that it may be discovered to breed in this State. The eggs are light sea-green, thickly spotted with reddish brown towards the larger end: the nest is placed on the ground. It enters the Union on the approach of winter, and is found as far south as 28° north latitude, from whence it ranges to the 68th parallel.

(*EXTRA-LIMITAL.*)

F. bicolor. (Towns. Acad. Nat. Sc. Vol. 7, p. 189.) Greyish black. Wings with a large patch of white. Tail-feathers edged with white. *Female*, reddish brown; beneath whitish streaked with brown. Length, seven inches. *Western prairies. Calamospiza* and *Corydalina* of authors.

F. atricapilla. (Aud. B. of A. Vol. 3, p. 162, pl. 193.) Yellowish brown: two white bands on the wings. Head black, with a yellow longitudinal stripe above. Tail long, rounded. Length, 8 inches. History incomplete. *Rocky mountains.*

F. cinerea. (Id. Ib. Vol. 3, p. 145, pl. 187. Above dark olive brown; beneath white, streaked and spotted with brown. A dusky greyish band through the eye. Claws long and acute. Length, six inches. *Texas* and *Columbia river.*

F. townsendi. (Id. Ib. Vol. 3, p. 143, pl. 188.) Deep olive brown. A band of white spots from the angle of the lower mandible. Breast whitish varied with dusky. Length, seven inches. *Rocky mountains.*

F. mortoni. (Id. Ib. Vol. 3, p. 151, pl. 190.) Reddish brown. Head bluish grey, with two longitudinal black bands: a light rufous band nearly surrounds the neck. Tail nearly even. Length, 5½ inches. History incomplete. *California.*

F. texensis. (Giraud, B. of Tex. plate.) Black: rump white mixed with black; beneath yellow. Secondaries edged and tipped with white. Length, 4·0. *Texas.*

F. harrisi. (Aud. B. of A. Vol. 7, p. 331, pl. 484.) Varied with rufous and black. Crown and throat black; cheeks ash-grey; wings bifasciate with white; sides of the breast spotted with black; rump plain olive-brown. Second quill longest. Length, 7·0. *Upper Missouri.*

GENUS EMBERIZA. Linnæus.

Bill stout, short, tapering, somewhat compressed. Upper mandible slightly convex above; the edges ascending to beneath the nostrils, then descending or direct, with a slight notch near the tip. Hind toe robust, longer than the lateral; the third united to the fourth at the base. Claws long and arched. Tail moderate, emarginate.

THE BLACK-THROATED BUNTING.

EMBERIZA AMERICANA.

PLATE XLIX. FIG. 3 (MALE).

(STATE COLLECTION)

Emberiza americana, GMELIN. *Black-throated Bunting*, PENNANT, Arct. Zool. Vol. 2, p. 363, pl. 17 (male).
Calandra pratensis, *May-bird*. BARTRAM, p. 291.
E. americana. WILSON, Orn. Vol. 1, p. 51, pl. 3, fig. 2 (male).
F. (Spiza) id. BONAPARTE, Annals Lyceum N. Y. Vol. 2, p. 107. NUTTALL, Manual Ornith. Vol. 1, p. 461. AUDUBON, folio, pl. 381.
E. id. KIRTLAND, Zool. Ohio, p. 183. AUDUBON, B. of A. Vol. 3, p. 58, pl. 156 (male and female).
E. id. GIRAUD, Birds of Long island, p. 100.

CHARACTERISTICS. Breast, line over the eye, and at the base of the bill, yellow. Chin white; throat with a black patch; wing-coverts, bright bay. *Female:* throat without the black patch. Length, 6½ inches.

DESCRIPTION. Bill stout, distinctly notched near the tip: edges of the lower mandible narrowed in. First quill slightly longest. Tail 1·5 longer than the tips of the closed wings, emarginate, with somewhat pointed feathers. Hind toe and claw 0·7.

COLOR. Head olive brown, with black or dusky streaks: back of the sides and neck slate-blue; interscapular region brown, streaked with black; rump brownish olive. Beneath, the black throat often spotted with white, and occasionally one or more black spots on the breast. Flanks light brown. Shoulder and base of the under wing-coverts sulphur-yellow; the smaller wing-coverts bright bay or chesnut. Chin white. *Female,* with merely a tinge of yellow over and beneath the eye, on the breast, shoulder, and under wing-coverts. Chin buff: a few narrow dark lines on the breast, but these are often wanting. Head and neck brown varied with black.

Length, 6·0–7·5. Alar extent, 10·0–11·0.

The *Black-throated Bunting* reaches this State from the South about the middle or latter end of May, and rarely advances farther east than Massachusetts. It breeds in every part of the Atlantic and Western districts. Its nest is on the ground, containing about five dusky white eggs with brown spots and lines. Its food consists of caterpillars, beetles, the canker-worm and other destructive insects. In winter it feeds probably on the harder seeds, for which its robust bill appears well adapted. It appears well worthy to be classed under a separate genus, allied in some respects both to PLECTROPHANES and COCCOTHRAUSTES. Charles Bonaparte has suggested the name of EUSPIZA, but I can no where find its characters. This species has been observed in Texas and Mexico.

THE YELLOW-WINGED BUNTING.

EMBERIZA PASSERINA.

PLATE LXVI. FIG. 150.

(STATE COLLECTION.)

Fringilla passerina. WILSON, Am. Orn. Vol. 3, p. 76, pl. 24, fig. 5.
F. (Spiza) passerina. BONAPARTE, Ann Lyc. Nat. Hist. New-York, Vol 2, p. 109.
Fringilla id. AUDUBON, fol. pl. 130; Orn. Biog. Vol. 2, p. 180, and Vol. 5, p. 497.
Savannah Finch. or *Yellow-shouldered Sparrow.* NUTTALL, Man. Ornith. Vol. 1, p. 494.
Coturniculus id. BONAPARTE, Geog. List, p. 32.
E. id. AUDUBON, B. of A. Vol. 3, p. 73, pl. 162 (male). GIRAUD, Birds of Long island, p. 103.

CHARACTERISTICS. Line over the eyes, lesser wing-coverts and shoulder, yellow. Breast brownish drab. Centre of the breast dull white. Length, 4 – 5 inches.

DESCRIPTION. Bill very stout and short, slightly arched; the upper mandible extending over the lower, and slightly notched at the tip. First and second quills longest, subequal. Tail with acute feathers, emarginate and rounded, extending 1·0 beyond the tips of the closed wings. Hind claw elongated, slightly arched.

COLOR of the head, blackish, with a white central streak and a yellow line over each eye. Back of the neck with rust-colored spots. Back varied with black, brown and white: the yellow line over the eye, passes into dull white beyond it. Middle of the breast and the vent soiled white. Quills and tail-feathers dusky, margined with whitish. Edge of the wing, at the shoulder, bright yellow. *Female:* central stripe on the crown cream-color.

Length, 4·5 – 5·0. Alar extent, 7·5 – 8·0.

This little Sparrow appears in this State about the first week in May, and remains with us in large numbers to the end of October. It doubtless breeds here, but I have never seen its nest, which is stated to be placed on the ground, and to contain four or five dingy white eggs sprinkled with brown spots. Its food consists of insects and their larvæ, and of the seeds of grasses and other plants. The history of its migrations is incomplete. It has been observed in Mexico, Texas, and on the shores of the Columbia river. In its progress northward along the Atlantic coast from Texas, it has not yet been observed in any of the States south of Maryland, where it is first seen, and thence through Pennsylvania, New-Jersey, New-York and Connecticut, which is its farthest eastern limit yet observed. Peabody does not mention it among the birds of Massachusetts. I have noticed it abundantly on Long island, and in Rockland and the neighboring counties.

THE VARIED BUNTING.

Emberiza henslowi.

Emberiza henslowi. Audubon, folio, pl. 70; Orn. Biog. Vol. 1, p. 360, and Vol. 5, p. 498.
Coturniculus id. Bonaparte, Geographical List, p. 32.
E. id. Audubon, Birds of Am. Vol. 3, p. 75, pl. 163 (male).
E. id., Henslow's Bunting. Giraud, Birds of Long island, p. 104.

Characteristics. Pale brown above; lighter beneath, and spotted. Tail very short, notched; the feathers graduated, acute and narrow. Length, five inches.

Description. Bill short, conical. Claws slender, compressed, acute, slightly arched; the hind claw elongated.

Color. Lower mandible flesh-colored, dusky above. Above pale brown: the central parts of the feathers brownish black; the margins of those on the back, bright red. Secondary coverts yellowish red on the outer webs. Quills dark brown, externally margined with yellowish brown. Tail-feathers dusky, margined externally with yellowish brown. Beneath pale yellowish grey; the breast, sides and throat spotted with brownish black.

Length, 5·0.

I have never seen this small Bunting, and have accordingly copied Audubon's description. I have introduced it here, as it is said to be abundant in the neighboring State of New-Jersey, where it breeds. It has probably been confounded with the Yellow-winged Bunting just described. It has been noticed in Georgia, Kentucky, Alabama, Louisiana, Florida and New-Jersey, and in Rockland county in this State. In the *System* of Charles Bonaparte, it forms the passage to Ammodramus, with which it has many relations. Its history is incomplete. Mr. Giraud states that on Long island it is not abundant, but it not as rare as is generally supposed.

THE FIELD BUNTING.

EMBERIZA PUSILLA.

PLATE LXVI. FIG. 152.

(STATE COLLECTION.)

Passer agrestis. BARTRAM, Travels, p. 291.
Fringilla pusilla. WILSON, Am. Orn. Vol. 2, p. 121, pl. 16, fig. 2.
Passerina id. VIEILLOT, Dict. Sc. Nat.
F. (Spiza) pusilla. BONAPARTE, Ann. Lyc. Vol. 2, p. 110. AUDUBON, folio, pl. 139.
F. juncorum. NUTTALL, Man. Orn. Vol. 1. p. 499. KIRTLAND, Zool. Ohio, p. 164. PEABODY, Mass. Rep. p. 325.
Emberiza id. RICHARDSON, F. B. A. Vol. 2, p. 251. AUDUBON, Birds of Am. Vol. 3, p. 77, pl. 164.
E. pusilla. GIRAUD, Birds of Long island, p. 105.

CHARACTERISTICS. Crown chesnut. Cheeks, line over the eye, throat and breast pale brownish drab. Interscapulars bay, streaked with black. Beneath greyish. First quill shorter than the sixth. Length, six inches.

DESCRIPTION. Bill conical, entire, with small bristles at the base. Third and fourth quills longest, subequal. Tail emarginate, rounded, 1·5 longer than the tips of the closed wings.

COLOR. Above streaked with dusky reddish and grey. A band over the eye, and the throat, bluish grey. Rump olive brown. Wings and tail dark brown, edged with whitish. Wing-coverts tipped with white.

This common little species reaches this State from the south in the beginning of April. It breeds with us, placing its nest on or near the ground, in which are usually deposited 5 to 6 white eggs of a fleshy tint, and thickly sprinkled with reddish brown dots. It feeds on insects and seeds. It has been observed sparingly in Maine, which appears to be its most northerly limits. On the approach of winter, it retreats to the south as far as Maryland; and during the winter, is found from that State as far south as Texas and Mexico.

THE CHIP-BIRD.

Emberiza socialis.

PLATE LXX. FIG. 160.

Passer domesticus Bartram, Travels, p. 291.
Fringilla socialis. Wilson, Am. Orn. Vol. 2, p. 127, pl. 16, fig. 5.
Passeriaa id. Vieillot, Dict. Sc.
F. (Spiza) id. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 109.
Chipping Sparrow. Nuttall, Man. Orn. Vol. 1, p. 497. Audubon, folio, pl. 104.
Emberiza socialis. Rich. & Swainson, F. B. A. Vol. 2, p. 251. Kirtland, Ohio Rep. p. 164. Peabody, Mass. Rep. p. 325. Audubon, Birds of Am. Vol. 3, p. 80, pl. 165.
E. id., Chipping Bunting. Giraud, Birds of Long island, p. 106.

Characteristics. Bill short, entirely black. Frontlet black. Crown chesnut, undivided. Chin and line over the eye white. Length, $5\frac{1}{2}$ inches.

Description. Bill short, thick, conical. The first four primaries nearly equal; the third and fourth slightly longest. Tail emarginate, 0·3 longer than the tips of the closed wings.

Color. Beneath the eye, hind part of the neck and underneath, ash-grey. Rump ash-colored. Beneath the white stripe over the eye, is a narrow black stripe, passing through the eye, and continued more or less interrupted behind the chesnut crown. Interscapular region brown, streaked with black. Primaries dusky, edged with chesnut. Tail dusky, edged with pale chesnut. *Female,* smaller; crown streaked with black. In winter, the frontlet black.

Length, 5·0 – 5·5. Alar extent, 7·5 – 8·0.

The familiar *Chipping-bird* is known to all. During the winter months, it migrates to the Southern States, and appears with us in the earliest spring. It breeds in this State, placing its nest on some low bush, and laying from four to five bright greenish blue eggs, spotted with brown chiefly at the larger end. It feeds on the smaller insects and seeds. Its hitherto observed range extends from the northern boundary of New-York to Texas.

THE TREE BUNTING.

EMBERIZA CANADENSIS.

PLATE LXXII. FIG. 164.

(STATE COLLECTION.)

Passer canadensis, BRISSON. *Fringilla id.* LATHAM.
Tree Sparrow. PENNANT, Arct. Zool Vol. 2, p. 273.
F. arborea. WILSON, Am. Orn. Vol. 2, p. 123, pl. 16, fig. 3.
F. (Spiza) canadensis. BONAPARTE. Ann. Lyc. N. Y. Vol. 2, p. 109.
E. id. AUDUBON, folio, pl. 188. NUTTALL, Man. Orn. Vol. 1, p. 495.
Emberiza id. RICHARDSON, F. B. A. Vol. 2, p 252. KIRTLAND, Zool. Ohio, p. 164. PEABODY, Mass. Report, p. 321. AUDUBON, Birds of Am. Vol. 3, p. 83, pl. 166. GIRAUD, Birds of Long island, p. 107.

CHARACTERISTICS. Crown bright bay. Stripe over the eye, sides of the neck, chin and breast pale ash. Wings with two white bars. Lower mandible yellow. Length, six and a half inches.

DESCRIPTION. Bill short and stout, slighily notched near the tip. The second and third quills slightly longer than the fourth and fifth. Tail long, emarginate and slightly rounded, 1·5 longer than the tips of the closed wings; the feathers narrow, somewhat pointed. Hind nail largest, long, incurved.

COLOR. Back varied with dark rufous, grey and white. Rump olive-brown. Eye-stripe short, and of a bright bay color. Chin, throat and breast ashen grey; belly and vent white, tinged with rufous. Flanks light reddish drab. A dark spot, more or less distinct, on the middle of the breast. Head bright bay above. Quills dusky, edged with soiled white: two white bars across the wings. Tail-feathers bordered with greyish; the edge of the external feather on each side white. *Female*, smaller, and its colors and markings not quite as distinct.

Length, 6·0 – 6·5. Alar extent, 9·0 – 9·5.

This little bunting is a northern bird, and is only seen in the Atlantic district of this State during the winter. On the approach of spring, it resorts to the fur countries, where it breeds. Audubon states that he has reason to believe that it breeds in Maine, and we may therefore expect to find it near the northern boundary of this State. Its eggs are of a pale uniform deep blue. It feeds on beetles, and hard seeds and berries. It occurs in Ohio, and has been noticed in Maryland.

THE SAVANNAH BUNTING.

EMBERIZA SAVANNA.

PLATE LXVII. FIG. 155.

(STATE COLLECTION.)

Water Finch? PENNANT, Arct. Zool. Vol. 2, p. 376 (young?).
Fringilla savanna. WILSON, Am. Orn. Vol. 4, p. 72, pl. 34, fig. 4 (male); Vol. 3, p. 55, pl. 22, fig. 3 (female).
F. (Spiza) id. BONAPARTE, Ann. Lyc. Vol. 2, p. 108.
Savannah Sparrow. NUTTALL, Man. Orn. Vol. 1, p. 489. AUDUBON, folio pl. 109.
F. savannarum. PEABODY, Mass. Rep. p. 324.
Emberiza savanna. AUDUBON, B. of Am. Vol. 3, p. 68, pl. 160. GIRAUD, Birds of Long island, p. 102.

CHARACTERISTICS. Cheeks, space over the eye, and ridge of the wings yellow. Above rufous, streaked with black. Breast and flanks spotted with brown. *Female*, with no yellow marks.

DESCRIPTION. Bill short, conic; the edges entire. The three first primaries subequal, longest. Hind claw nearly as long as the toe. Tail short, emarginate, extending 1·2 beyond the tips of the closed wings.

COLOR. Crown with black streaks. Chin, belly and vent white. Legs yellowish or flesh-colored. Edges of the primaries white; of the tail-feathers lightish. General color pale reddish brown: above spotted with black; the breast and sides with small dark brown spots and streaks. *Female:* line on the crown, and over and beneath the eyes cream-colored.

Length, 5·5 – 6·0. Alar extent, 8·5 – 9·0.

The *Savannah Bunting* is quite common in this State, occurring from April to October, and occasionally is found during the winter along its maritime border. It breeds in this State; the nest being placed on the ground, and containing four or five pale bluish eggs mottled with purplish brown. It feeds on beetles and seeds of grasses. It ranges from Texas to the 52d parallel, and along the Pacific it extends its range to Columbia river.

THE BLUE-STRIPED BUNTING.

EMBERIZA LINCOLNI.

Fringilla lincolnii. AUDUBON, Orn. Biog. Vol. 2, p. 539; fol. pl. 193.
Passerculus id. BONAPARTE, Comp. List, p. 33.
Pencaca id. AUDUBON, Synopsis, p. 113; B. of A. Vol. 3, p. 116, pl. 172.

CHARACTERISTICS. Head chesnut, with a blue band in the middle and on each side. Throat and belly white. Length, 5 to 6 inches.

DESCRIPTION. Bill robust, straight, somewhat compressed, obsoletely notched towards the tip. Wings short, convex, rounded; the first and seventh quills subequal. Tail rather long, graduated, of twelve narrow rather acute feathers.

COLOR. Head chesnut, streaked with black. General color above yellowish brown, with streaks of brownish black. Quills and coverts deep brown, margined externally with yellowish brown. Tail yellowish brown; the outer feathers paler. Throat white, streaked with dusky, with a line of dusky spots on each side. Breast and sides pale buff, with streaks of dusky.

Length, 5·0 – 5·5. Alar extent, 8·4.

This bunting is very rare. It has been observed by Audubon in Labrador in July, and by Mr. William Cooper in the neighborhood of New-York. Its history as yet is incomplete.

(*EXTRA-LIMITAL.*)

E. grammaca. (BONAP. Am. Orn. Vol. 1, p. 47, pl. 5.) Head striped with white and red; the central stripe inclining to black. Tail rounded; lateral tail-feathers partly white. Length, $6\frac{1}{2}$ inches. *Upper Missouri.*

E. townsendi. (AUD. B. of A. Vol. 3, p. 62, pl. 157.) Bluish grey. Line over the eye, chin and throat white: a faint dusky line on each side of the throat. Length, $5\frac{1}{2}$ inches. *Rocky mountains. Pennsylvania.*

E. pallida. (ID. Ib. Vol. 3, p. 71, pl. 161.) Light yellowish brown above; greyish white beneath: a dusky white band over the eye. Neck light buff. Tail long, emarginate. Length, 5 inches. *Missouri*, and *Northern regions.*

GENUS AMMODRAMUS. Swainson.

Bill rather slender, somewhat compressed, with a slight notch near the tip, which is deflected. Nostrils small, elliptical, basal, partially concealed. Toes rather long; hind toe large. Claws long, tapering, little arched, much compressed, laterally grooved. Wings short and rounded; the second, third and fourth quills longest. Tail graduated, and composed of narrow acuminate feathers.

THE SEASIDE FINCH.

AMMODRAMUS MARITIMUS.

PLATE LXVII. FIG. 153.

(STATE COLLECTION.)

Fringilla maritima. Wilson, Am. Orn, Vol. 4. p. 68, pl. 34, fig. 2.
Passerina maritima. Vieillot, Dict. Sc.
F. (Spiza) id. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 110. Audubon, fol. pl. 93.
F. id. Nuttall, Man. Orn. Vol. 1, p. 110. Peabody, Mass. Rep. p. 326.
Ammodramus id. Audubon, B. of A. Vol. 3, p. 103, pl. 172.
A. id., Grey Shore Finch. Giraud, Birds of Long island, p. 112.

Characteristics. Plain olive brown above. Streak over the eye, and on the shoulders, greenish yellow. Rump slate blue. Stripe beneath the eye cream or white. Chin and vent white. Breast and flanks mottled grey and brown. Length, 8 inches.

Description. Upper mandible stouter and more incurved than in the following species, 0·6 long, strongly carinate and distinctly notched. Hind claw 0·35, and longer than the toe. First and sixth primaries equal; third and fourth subequal, longest. Tail 2·1 long, and extending 1·6 beyond the tips of the closed wings.

Color. Wings uniform wood-brown; the outer webs of the quills olivaceous, as are also the tail-feathers. On the back, the feathers are brown in the centre. Ear-feathers and borders of the white chin dull ash. The yellow line from the base of the bill over the eye becomes greenish and obsolete beyond it. The under side is not streaked as in the following, but is occasionally obscurely mottled with greyish brown and white, with a faint rufous tinge on the sides.

Length, 7·0 – 8·0. Alar extent, 10·0 – 11·0.

The *Seaside Finch*, as its name imports, is common along our maritime borders. It is found during the summer in our salt marshes, where it breeds. The nest is on the ground, containing from four to six greyish white eggs freckled with brown. It feeds chiefly on marine crustacea, and such insects as resort to the seashore. It ranges along the coast to this State, and a few are occasionally found on the shores of Massachusetts.

THE QUAIL-HEAD.

Ammodramus caudacutus.

PLATE LXVII. FIG. 154.

(CABINET OF THE LYCEUM.)

Fringilla caudacuta. Latham, Ind. Orn. Vol. 1, p. 459.
Sharp-tailed Oriole. Pennant, Arct. Zool. Vol. 2, p. 261? Wilson, Am. Orn. Vol. 4, p. 70, pl 34, fig. 3 (male).
F. (Spiza) id. Bonaparte, Ann. Lyc. Vol. 2, p. 110. Audubon, folio pl. 149. Nut. Man. Orn. Vol. 1. p. 505.
Ammodramus id. Audubon, B. of A. Vol. 3, p. 103, pl. 174.
A. id., Buff-breasted Shore Finch. Giraud, Birds of Long island, p. 113.

Characteristics. A stripe of reddish brown above and beneath the eye. Tail graduated, with very acute feathers. Length, 5 inches.

Description. Bill robust, somewhat curved and carinate above the nostrils, faintly notched at the tip. First, second and third quills largest, subequal. Tail-feathers acutely bevelled on both vanes, but the shafts do not extend beyond the webs. Secondaries nearly as long as some of the quills. Hind claw as long as the toe. Tail extending 1·7 beyond the tips of the closed wings.

Color. Above olive. Crown bluish slate in the centre and chesnut on the sides, margined by the light reddish brown over the eyes. Ear-feathers dark slate. A broad band of reddish brown from the lower mandible, down the neck. Shoulder with a slight tinge of lemon yellow. Chin, breast and flanks buff; the two latter streaked with brown. Throat, belly and vent soiled white: the under tail-coverts buff, streaked with brown.

Length, 5·0 – 5·5. Alar spread, 7·0 – 7·5.

The name of *Quail-head*, by which this species is distinguished among our gunners, is derived from its distant resemblance to the head of the common Quail. Like the preceding, it is found only in salt marshes, where it breeds. Its nest is placed on the ground, and contains four or five dull white eggs sprinkled with light brown dots, which are most numerous towards the larger end. Its food consists of shrimps, aquatic insects and grass seeds. It is a resident in the Southern States, and is found as far south as Mexico. In summer it migrates northwardly along the coast as far as Massachusetts.

THE SWAMP FINCH.

AMMODRAMUS PALUSTRIS.

PLATE LXXI. FIG. 161.

(STATE COLLECTION.)

Fringilla palustris. WILSON, Am. Orn. Vol. 3. p. 49, pl. 22, fig 1.
F. (Spiza) id. BONAPARTE, Ann. Lyc. Vol. 2, p. 110.
F. juncorum. NUTTALL, Manual Orn. Vol. 1, p. 502. AUDUBON, folio pl. 64.
Zonotrichia, SWAINS. & RICHARDSON. KIRTLAND, p. 162. PEABODY, Mass. Rep. p. 326.
Ammodramus id., Swamp Sparrow. AUDUBON, B. of A. Vol. 3. p. 110, pl. 175.
A. id., Marsh-shore Finch. GIRAUD, Birds of Long island, p. 114.

CHARACTERISTICS. Front black. Crown bay; line over the eye, breast and sides of the neck bluish ash. Length, 6 inches.

DESCRIPTION. Bill robust, slightly incurved and notched near the tip. First primary shorter than the sixth: second, third and fourth primaries subequal; the third slightly longest. Tail emarginate, rounded; the feathers pointed as in the preceding, but broader, 1·7 longer than the tips of the closed wings.

COLOR. Crown deep bay, usually streaked with black. Ear-feathers brown, margined above with blackish. Wing-coverts bright bay. Flanks and under tail-coverts pale chesnut; the latter striate with dusky. Chin greyish white. *Female,* scarcely differs from the male, except in the absence of the black frontlet and black streaks on the crown.

Length, 5·5 – 6·0. Alar extent, 7·5 – 8·0.

This species, which is often called the *Red Grass-bird* in this State, occurs in swamps, wet meadows, and along the margins of rivers. Its nest is on the ground, containing a few soiled white eggs, speckled with reddish. It feeds on grass seeds and aquatic insects. It does not appear to follow the ordinary law of migration, although Audubon declares that it is found from Texas to North-Carolina in winter. It breeds abundantly in this State during summer, particularly in the marshes of the western district; and yet, according to Audubon, it is very abundant about Boston during the winter. Found from Texas to Labrador.

(*EXTRA-LIMITAL.*)

A. macgillivrayi. (AUD. B. of A. Vol. 3, p. 106, pl. 173.) Dark brown above; lighter beneath. Breast and sides with dusky streaks. Sides of the neck tinged with rufous. Length, 5½ inches. *Carolina, Texas.*

A. bachmani. (ID. Ib. p. 114, pl. 176.) Reddish brown above; yellowish beneath: a yellowish streak over the eye. Tail graduated. Length, 6 inches. *Carolinas.* History incomplete.

A. lecontii. (ID. Ib. Vol 7, pl. 488.) Yellowish red varied with black. Cheeks, a broad band over the eyes, and lower parts buff. Tail round; the feathers acute. Length 4·7. *Missouri.*

GENUS CARDUELIS. Brisson.

Bill short or moderate, narrower than the head, conical, very stout at the base, straight and compressed: both mandibles acute. The three first quills subequal and longest. Tail rather short, emarginate.

THE YELLOW-BIRD, OR AMERICAN GOLDFINCH.

Carduelis tristis.

PLATE LXVI. FIG. 151 (Male).

(STATE COLLECTION.)

Fringilla tristis, Lin. 12 ed. p. 320.
Golden Finch. Pennant, Arct. Zool. Vol. 2, p. 371 (summer); p. 372, *Siskin* (winter dress):
Carduelis americana. Bartram, Travels, p. 291.
F. tristis. Wilson, Am. Orn. Vol. 1, p. 20, pl. 1, fig. 2 (male). Bonaparte, Ann. Lyc. Vol. 2, p. 111, and Am. Orn. Vol. 1, p. 57, pl. 6, fig. 4 (female). Audubon, fol. pl. 23.
American Goldfinch. Nuttall, Man. Orn. Vol. 1, p. 507.
Carduelis americana. Rich. & Swainson, F. B. A. Vol. 2, p. 268. Kirtland, Ohio Rep. p. 164. Peabody, Mass. Rep. p. 326.
Chrysometris. Bonaparte, Geog. and Comp. List, p. 33.
Carduelis tristis. Audubon, B. of Am. Vol. 3, p. 129, pl. 181. Giraud, Birds of Long island, p. 117.

Characteristics. Yellow. Wings black, varied with white: tail-feathers interiorly white towards the tips. Head black. *Female* and *young:* head and all the body above brownish olive; beneath yellowish white. Length, $4\frac{1}{2}$ inches.

Description. Bill moderately slender, sinuate on the edges. Second primary longest, and subequal with the third. Tail deeply emarginate, 0·8 longer than the tips of the closed wings.

Color. *Summer:* Bright lemon-yellow, except the head, wings and tail. Summit of the head black: greater wing-coverts tipped with yellowish white, exhibiting two whitish bands; quills edged with whitish. *Winter:* Head yellow olive; back reddish drab; shoulder and throat yellow: beneath soiled brownish white. *Female*, brownish olive; beneath yellowish white.

Length, 4·5 – 5·0. Alar extent, 8·0 – 8·3.

This well known bird is found in this State at all seasons of the year. It feeds on various oily seeds, particularly of the sunflower, lettuce, thistle, etc. The nest is made on trees or tall bushes, containing pure white eggs, according to Audubon with reddish brown spots at the lower end. This bird is often kept in cages for its song. Its geographical range extends from the tropics to the fur countries, or to the 60th parallel; breeding throughout that distance. It has been observed near the Columbia river.

THE PINE FINCH.

CARDUELIS PINUS.

PLATE LIX. FIG. 136.

(STATE COLLECTION.)

Fringilla pinus. WILSON, Am. Orn. Vol. 2, p. 133, pl. 57, fig. 1.
F. (Carduelis) pinus. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 111. AUDUBON, fol. pl. 180. NUTTALL, Man. Orn. Vol. 1, p. 511. PEABODY, Mass. Rep. p. 327.
Linaria pinus. AUDUBON, B. of A. Vol. 3, p. 125, pl. 180.
Chrysometris id. BONAPARTE, Geog. and Comp. List, p. 33.
L. pinus, Pine Linnet. GIRAUD, Birds of Long island, p. 115.

CHARACTERISTICS. Varied with olive-brown and black; beneath lighter. Wings dusky, with one or more yellowish bars. Primaries except the first and tail-feathers, edged with yellow. Length, 4½ inches.

DESCRIPTION. Bill short, conical, very acute. First and second quills subequal; the second slightly longest. Tail deeply emarginate; the feathers much acuminated, being bevelled on both vanes, 0·5 longer than the tips of the closed wings.

COLOR. General color greenish olive brown. Wing-coverts edged with light rufous. Base of the primaries broadly marked with sulphur-yellow on their outer webs; then narrowly edged with olive, and tipped with whitish: shafts dark brown or black. Upper and under tail-coverts, and beneath the wings, yellow. *Female*, differs but little from the male; the yellow not so obvious, and more dusky beneath.

Length, 4·5 – 5·0. Alar extent, 8·0 – 8·5.

This modest colored little species has, like the preceding, a wide geographical range. They have been observed from Maine to Georgia, during the autumn and winter. In this State, I have noticed them from October to March, and have little doubt but that they may be considered here as permanent residents. They feed on the seeds of the thistle, pine, larch, etc. It has been noticed as far north as the 52d parallel, and perhaps ranges still farther north. It is usually treated as a northern species, extending its range southward during the winter; but its history as yet is incomplete.

(*EXTRA-LIMITAL.*)

C. magellanicus. (AUD. B. of A. Vol. 3, pl. 182.) Yellow. Crown, sides of the head and throat black. Wings and tail varied with yellow and black. Length, 4½ inches. *Ohio.* Rare.

C. psaltria. (ID. Ib. pl. 183.) Greenish olive; beneath wholly yellow. Crown, wings and tail black: three outer tail-feathers white in the middle. Length, 4½ inches. *Arkansa, Louisiana.*

C. mexicanus. (ID. Ib. p. 184, *yarrelli.*) Yellow. Crown black. Olivaceous green above. Wings with two greenish yellow bands. Tail yellow on its basal half. *Female:* Crown olivaceous; base of the quills and lateral tail-feathers white. Length, 4 inches. *California.*

C. stanleyi. (ID. Ib. pl. 185.) Olivaceous. Bill thick. Wings and tail edged with white and yellowish white: two bright yellow bands on the wings. Length, 5 inches. *California.*

GENUS LINARIA. Ray.

Bill short, conical, higher than broad at the base, very acute at the tip.

THE LESSER RED-POLL.

LINARIA MINOR.

PLATE LXX. FIG. 161.

(STATE COLLECTION.)

Fringilla linaria. Linnæus, 12 ed. p. 322.
Lesser Red-poll Finch. Pennant, Arct. Zool. Vol. 2, p. 379. Wilson, Am. Orn. Vol. 4, p. 42, pl. 30, fig. 4 (male); Vol. 9 (Ord's reprint), p. 291.
F. (Carduelis) id. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 112. Audubon, fol. pl. 375.
Linota id. Bonaparte, Geog. and Comp. List, p. 34. Nuttall, Man. Orn. Vol. 1, p. 512.
Linaria minor. Rich. & Swainson, F. B. A. Vol. 2, p. 267. Kirtland, Zool. Ohio, p. 183. Peabody, Mass. Rep. p. 328. Audubon, B. of A. Vol. 3, p. 122, pl. 179.
Linaria id. Giraud, Birds of Long island, p. 116.

Characteristics. Greyish, varied with black and rufous above; beneath dusky white. Frontlet and chin blackish. Head, neck, breast and rump crimson. *Female:* crown alone crimson. Length, 5·0.

Description. The first three quills subequal; the second longest. Tail with its acuminate feathers long, and deeply forked.

Color. Frontlet, loral space and throat varying from brownish to black. Back of the head, neck, back and scapulars brown; toward the rump, edged with white and tipped with crimson. Wings and tail dusky, edged with greyish brown, and with two bands of the same on the tips of the coverts. Sides, front of the neck, and the breast crimson. Belly, vent and under tail-coverts white, tipped with crimson; flanks streaked with dusky. *Female*, brown above varied with black. Tail-feathers margined all round with whitish: frontlet dark greyish; chin black; throat dusky brown; breast and flanks striate with brown. *Young:* head grey.

Length, 5·0 – 5·3. Alar spread, 8·0 – 8·5.

This little arctic species migrates from the north (where it occupies both continents) in the winter, along the Atlantic, as far south as Pennsylvania, and in the interior to Ohio and Kentucky. Their appearance is an evidence of extreme cold at the north. In this State it occurs every winter, and affords a rich treat to epicures. Feeds on berries, the seeds of grasses and of the pine, and also their buds. Eggs pale bluish green, with a few reddish spots at the larger end.

THE MEALY RED-POLL.

LINARIA BOREALIS.

Fringilla borealis, SAVI. TEMMINCK, Manual Ornith. Vol. 3, p. 264. AUDUBON, fol. pl. 42. ID. Birds of Am. Vol. 3, p. 120, pl. 178.
Linota id. BONAPARTE, Geog. and Comp. List, p. 34.

CHARACTERISTICS. Frontlet, loral space and throat black; beneath whitish. Crown, cheeks, flank and rump red. Length, $5\frac{1}{2}$ inches.

DESCRIPTION. Above dusky, streaked with lighter; the rump quite light-colored. Wings and tail dusky, edged with soiled white, and with two light-colored bands on the wings. Beneath greyish white, streaked with dusky. Crown crimson. Cheeks, sides of the body, and hind part of the rump pale carmine. *Female*, with the black on the forehead and throat tinged with brown; crimson patch on the crown smaller; no red on the sides and rump.

Length, 5·3. Alar extent, 9·0.

I have never met with this species in this State, where it is doubtless very rare. It has, however, been seen both in this State and in New-Jersey. It is a northern species, common to both continents. In the breeding season, the whole under surface is said to be of rich carmine. Feeds on berries. Its history incomplete.

GENUS ERYTHROSPIZA. BONAPARTE.

Bill short, conic, robust, bulging, pointed: dorsal line slightly convex; tips nearly equal, faintly notched. Tail deeply emarginate. Wings moderate; the outer four quills longest. Tarsi short, slender.

THE CRESTED PURPLE FINCH.

ERYTHROSPIZA PURPUREA.

PLATE LXXII. FIG. 163.

(STATE COLLECTION.)

Fringilla purpurea, GMELIN. *Purple Finch*, PENNANT, Arct. Zoology, Vol. 2, p. 377. WILSON, Am. Orn. Vol. 1, p. 119, pl. 7, fig. 4 (male); Vol. 5, p, 87, pl. 42, fig. 3 (male, winter).
F. (Coccothraustes) id. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 114. AUDUBON, folio pl. 4.
American Linnet. NUT. Man. Orn. Vol. 1, p. 529. KIRTLAND, Zool. Ohio, p. 184. PEABODY, Mass. Rep. p. 330.
Erythrocorax, BREHM.
Erythrospiza id. BONAPARTE, Geog. and Comp. List, p. 34. RICH. & SWAINSON, F. B. A. Vol. 2, p. 264, *var.?* AUDUBON, B. of A. Vol. 3, p. 170, pl. 196.
E. purpurea. GIRAUD, Birds of Long island, p. 126.

CHARACTERISTICS. Crimson; deepest on the head and throat. Wings and tail dusky. Belly light-colored. *Female* and *yearling male*, varied with pale brown and dusky, without crimson; the latter with the rump tinged yellow. Length, six inches.

Description. Second and third primaries longest, subequal; the second slightly longest. Tail deeply emarginate, almost forked, extending 1·2 beyond the tips of the closed wings.

Color. Bill brownish black above; lighter beneath. Fore part of the back streaked with brown. Wings and tail deep brown; the quills tipped and edged with red. Frontlet cream-colored. All the rest of the body of a rich crimson. *In the change*, a line of lighter crimson over the eye; outer webs of quills dull red for two-thirds of their length: vent and under tail-coverts streaked with brown. *Female*, in the State Collection, wholly olive above, striped with white and dusky; beneath grey-white, with arrow-headed spots of brown: a lighter line above and below the eye. *Male of the first year*, differs from the female only in the bright olive-yellow of the rump and chin, and a slight degree of the same on the wing-coverts; the tail-feathers also are edged externally with olive.

Length, 5·5 – 6·0. Alar spread, 9·0 – 9·3.

This species I have seen in the Atlantic district of this State, as late as November, December and January. Audubon met with it in the northern district in June, when it was breeding. They leave us in May for the north. The eggs are bright green. It feeds on buds and the berries of evergreens in winter, and on insects in summer. It has a good flavor. Its geographical range is from Mexico to 55° north latitude. It occurs on the Columbia river.

(*EXTRA-LIMITAL.*)

E. frontalis. (Aud. Vol. 3, p. 175, pl. 197.) Greyish brown. Forehead, band over the eye, throat, breast and rump carmine. Head, hind neck and anterior part of the back slightly tinged with red. Rare. Length, 6¼ inches. *Rocky mountains.* According to Mr. Giraud, it is numerous in Texas.

E. tephrocotis. (Id. Ib. pl. 198.) Umber brown. Head ashen grey, spotted with black. Feathers of the wings and rump broadly edged and tipped with rose-red. Very rare. Length, 6 inches. *Northern regions.*

GENUS PITYLUS. Cuvier.

Bill short, very robust, much higher than broad, tapering to a point, arched above, with a salient angle at the middle of the edge of the upper mandible. Nostrils covered with the frontlet-feathers; bristles at the base. Feathers of the head elongate and erectile. Tail long and rounded.

THE CARDINAL GROSBEAK.

Pitylus cardinalis.

PLATE LXII. FIG. 143 (Male, winter dress).

(STATE COLLECTION.)

Loxia cardinalis. Linnæus, Syst. Nat. p. 300. Pennant, Arct. Zool. Vol. 2, p. 349. Wilson, Am. Orn. Vol. 2, p. 38, pl. 11, fig. 1 and 2 (male and female).
Pitylus id. Cuvier, Règne Animal.
F. (Coccothraustes) id. Bonaparte, Ann. Lyc. N. Y. Vol 2, p. 113. Audubon, fol. pl. 159.
Red-bird. Nuttall, Man. Orn. Vol. 1, p. 519.
Cardinalis virginianus. Bonaparte, Geog. and Comp. List, p. 35. Kirtland, Ohio Rep. p. 184. Peabody, Mass. Rep. p. 329.
Pitylus id. Audubon, B. of A. Vol. 3, p. 198, pl. 203. Giraud, Birds of Long island, p. 132.

Characteristics. Red; beneath brighter. Frontlet and chin black: bill red. *Female* and *young*, drab, tinged with reddish beneath; tip of the crest, wings and tail tinged with red. Length, 8 inches.

Description. Third, fourth and fifth primaries subequal, longest. Feathers of the crown long and pointed. Tail long, straight, rounded, 2·8 longer than the tips of the closed wings.

Color. The outer webs of the quills red; the inner brown towards the tips, and margined with red towards their bases. Forehead, lores, chin and upper part of the throat black. *Female*, crested; greyish brown above; frontlet and chin brownish black; breast reddish drab; belly mixed with grey; outer webs of the first six primaries whitish; the tail not as long as in the male.

Length, 8·0 – 8·5. Alar spread, 11·0 – 11·5.

This beautiful bird is seen every year, during the heats of summer, in the Atlantic district of this State. I have also seen them in Delaware and Chenango counties. They doubtless breed with us, as they are known to do in the neighboring States of New-Jersey and Massachusetts, but I have never met with their nests. The eggs are dusky white, spotted with olive brown. On account of the beauty of their plumage and their notes, they are often reared, and breed in cages. A constant resident from Maryland to Mexico. In the summer, ranges and breeds to the 42d parallel. A constant resident in Ohio, where it is yearly becoming more abundant. Feeds on fruits and berries, and the seeds of corn and grasses. Known in this State under the names of *Red-bird* and *Crested Red-bird.*

GENUS PIPILO. Vieillot.

Bill short, stout, conical, subcompressed; the edges somewhat inflected, ascending for more than a third, then direct, with a slight festoon: small bristles at the base of the upper mandible. Third or fourth quill longest. Tail long, rounded.

THE CHEWINK, OR GROUND ROBIN.

Pipilo erythrophthalmus.

PLATE LXXI. FIG 162 (Male).

(STATE COLLECTION.)

Fringilla erythrophthalma. Linnæus, Syst. Nat. p. 318.
Towhee Bunting. Pennant, Arct. Zool. Vol. 2, p. 359.
Pipilo ater. Vieillot, Dict. Sc.
Emberiza erythrophthalma. Wilson, Am. Orn. Vol. 2, p. 35, pl. 10, fig. 5 (male); Vol. 6, p. 90, pl. 53, fig. 5 (female). Audubon, folio, pl. 29. Bonaparte, Ann. Lyc. Vol. 2, p. 112. Nuttall, Man. Orn. Vol. 1, p. 515.
Pipilo id. Richardson, F. B. A. Vol. 2, p. 261. Kirtland, Ohio Rep. p. 164. Peabody, Mass. Rep. p. 328. Audubon, Birds of America, Vol. 3, p. 167, pl. 195.
P. id., Towhee Ground-finch. Giraud, Birds of Long island, p. 124.

Characteristics. Black. Breast white; flanks and vent bay: a white spot on the wings. Tail with the three outer feathers partly white. *Female,* reddish brown where the male is black. Length, 8 inches.

Description. Third quill longest; second and fifth subequal; first and eighth subequal. Tail 3·0 – 3·3 long, rounded, and extending 2·8 beyond the tips of the closed wings.

Color. All above black. Wings with one and sometimes two white bars; tertials edged with white or rufous white. The first external tail-feather white on the outer web, except towards the tip. Spots of the same color on the inner webs of the three external feathers. Bill black. Irides bright red. Breast white. Abdomen pale red. Sides reddish brown. *Female,* olive brown or rufous brown above. Centre of the belly white, immaculate. Flanks and under tail-coverts bright bay; the sinuated webs of the quills white: a white spot at the base of the quills; tertials edged with rufous.

Length, 7·5 – 8·5. Alar spread, 10·0 – 12·0.

This beautiful and unobtrusive little species is familiarly known in this State (where it breeds) under the name of *Chewink,* from its peculiar note, and of *Ground Robin,* from its seldom attempting to fly high. In Louisiana it is called, from its plumpness, *Grasset,* and is esteemed by epicures. Its nest is sunk in the ground, and it lays flesh-white eggs thickly spotted with brown. It feeds on the earth-worm (*Lumbricus terrenus*), wire-worm (*Julus*),

and the larvæ of insects. It extends across the continent to the Rocky mountains. It winters in the Southern and Western States, reaching us in April, and extending its migration north to Labrador. Few remain with us beyond the latter part of November, unless the winter should be remarkably open. Its geographical range appears to be comprised between the 23d and 48th parallels.

(*EXTRA-LIMITAL.*)

P. arcticus. (Aud. Vol. 3, p. 164, pl. 194.) Black above and round the neck and breast. Back, scapulars and wing-coverts tipped with white. Inner web of three outer tail-feathers with a white spot. *Female*, blackish grey, smaller. Length, 8 inches. *Columbia river.*

GENUS SPIZA. Bonaparte.

Bill short, conical, acute. Upper mandible convex above; the edges ascending for one-third of their length, with a slight notch near the slightly bent tip. Nostrils basal, roundish, partly concealed by feathers. Tarsus much compressed. Tail emarginate. Hind toe large. Second and third quills longest; first and fourth subequal. Plumage brilliant.

THE INDIGO-BIRD.

Spiza cyanea.

PLATE LXVIII. FIG. 157.

(STATE COLLECTION.)

Tanagra cyanea. Linnæus, Syst. Nat. p. 315.
Indigo Bunting. Pennant, Arct. Zool. Vol. 2, p. 365 (*blue do.*, moulting male). Wilson, Am. Orn. Vol. 1, p. 100, pl. 6, fig. 5 (male). Bonaparte, Am. Orn. Vol. 2, p. 91, pl. 15, fig. 4 (female). Audubon, fol. pl. 74. Nuttall, Man. Orn. Vol. 1, p. 473. Kirtland, Zool. Ohio, p. 183.
Spiza cyanea. Audubon, B. of Am. Vol. 3, p. 96, pl. 170.
S. id., Indigo-painted Bunting. Giraud, Birds of Long island, p. 110.

Characteristics. Blue, with greenish tints. Wings and tail-feathers dusky. *Female*, reddish brown; beneath soiled buff. Length, $5\frac{1}{2}$ inches.

Description. Upper mandible with slightly sinuated edges, and notched near the tip; this notch, in the specimens I have examined, is most distinct in the female. Second quill longest. Tail distinctly emarginate and rounded, extending 1·1 beyond the tip of the folded wings.

Color. Sky-blue, showing in some lights a greenish tint; the outer webs of the primaries whitish. Quills, larger wing-coverts and tail dark brown. *Autumnal male*, bluish with brown patches: obsolete bands across the tail. In moulting, the male resembles more or less the female. *Female:* lower mandible light-colored; chin, throat and breast buff; belly and vent soiled white; wings and tail darker than the light yellowish brown above.

Length, 5·5 – 6·0. Alar spread, 7·0 – 8·0.

The *Indigo-bird* is one of our most beautiful visiters from the South. It leaves Mexico and appears in Texas in April, and in New-York in the latter part of May, where it breeds. The nest is usually on some low bush, with white immaculate eggs. Its food consists of caterpillars, worms, grasshoppers and seeds. The male is three years in acquiring his full plumage. The species occurs throughout the whole Union, extending to the great lakes and to the 45th parallel. It leaves New-York about the middle of September.

(*EXTRA-LIMITAL.*)

S. ciris. (Aud. B. of Am. Vol. 3, pl. 169.) Red. Head and back above purplish blue; back yellowish green; wings dusky red. *Female* and *yearling male*, green olive; wings beneath yellowish. Length, 5 inches. *Carolina, Louisiana.*

S. amœna. (Id. ib. Vol. 3, pl. 171.) Verdigris blue; beneath white. Breast pale ferruginous; wings bifasciate with white. *Female*, brown above; rump greenish blue; throat ferruginous. Length, 5·5. *Columbia river.*

GENUS PYRANGA. Vieillot.

Bill robust, moderate, compressed towards the end, trigonate and somewhat depressed at the base; the upper mandible with a festoon, forming an obtuse tooth on each side near the middle: distinct bristles at the base. Tongue short, lacerated at the tip. The three first primaries subequal, longest. Tail moderate, slightly emarginate. Female and young differing much in plumage from the male.

THE RED-BIRD.

Pyranga æstiva.

PLATE LXV. FIG. 148 (Male).

(STATE COLLECTION.)

Tanagra æstiva et *mississippiensis*, Gmelin.
Summer Tanager. Pennant, Arct. Zool. Vol. 2, p. 369.
Merula flammula. Bartram, Travels, p. 290 (bis).
Pyranga æstiva, Vieillot. Wilson, Am. Orn. Vol. 1, p. 95, pl. 6, fig. 3 and 4. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 105. Aud. fol. pl. 44. Nuttall, Man. Orn. Vol. 1, p. 469. Kirtland, Zool. Ohio, p. 183. Audubon, B. of A. Vol. 3, p. 222, pl. 208.

Characteristics. Vermilion red. Inner vanes and tips of the quills dusky. Tail nearly even. *Female* and *young*, yellowish; beneath brownish yellow. *Young male*, spotted with green. Length, 7½ inches.

Description. Bill rather short, but robust. Nostrils round, basal. Tail-feathers acute; second quill longest.

Color. Entirely of a rich vermilion, except the inner vanes and tips of the quills. Bill horn-colored above, bluish beneath. Legs dusky bluish. Iris hazel. *Female*, brownish yellow olive above; wing-coverts dusky, edged with yellow; quills and tail deep brown, externally edged with yellowish. *Young*, as in the male, but of a duller tint, and spotted with green.

Length, 7·0 – 7·5. Alar extent, 11·5 – 12·0.

The *Red-bird*, or *Summer Red-bird*, comes to us from the South, but not in great numbers, and only during the hottest part of the summer: it rarely passes east of this State. It is not known to breed here. The eggs are of a light blue color. Feeds on insects, and more especially the larger beetles. It properly belongs to Mexico, and even farther south, and scarcely remains within the limits of the United States (where it breeds) more than four months.

THE BLACK-WINGED RED-BIRD.

PYRANGA RUBRA.

PLATE LXV. FIG. 149 (MALE).

(STATE COLLECTION.)

Tanagra rubra, LINNÆUS. *Canada Tanager*, PENNANT, Arct. Zool. Vol. 2, p. 369 (male. *olive do.* female).
Merula marilandica, BARTRAM, Travels, p. 290 (bis). *Pyrangra rubra*, VIEILLOT.
Tanagra id. WILSON, Am. Orn. Vol. 2, p. 42, pl. 11, figs. 3, 4 (male and female).
T. (Pyranga) rubra. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 105. AUDUBON, fol. pl. 354. NUTTALL, Man. Orn. Vol. 1, p. 465. RICHARDSON, F. B. A. Vol. 2, p. 273. PEABODY, Zool. of Mass. p. 319.
Pyranga id. AUDUBON, B. of A. Vol. 3, p. 226, pl. 209.
P. id., Scarlet Tanager. GIRAUD, Birds of Long Island, p. 135.

CHARACTERISTICS. Scarlet red. Wings and emarginate tail black. Base of the plumage ash; then white. *Female* and *young*, olive green; beneath yellow. Wings and tail dusky. Length, 7 inches.

DESCRIPTION. Bill robust, rather short, compressed towards the end, acute: a faint notch towards the tip. Claws large and arched. Second quill longest. Very small bristles at the base of the upper mandible.

COLOR, as in the specific phrase. Axillary feathers, inner lower wing-coverts, and a part of the inner webs of the quills white. *Female*, olive or yellowish green; the secondaries and tail tipped with white. The *young male*, after the moult, often spotted with greenish yellow, and every feather marked with black.

Length, 6·5 – 7·0. Alar spread, 10·5 – 11·5.

The *Black-winged Red-bird*, or *Fire-bird* and *Tanager*, as it is often called in this State, reaches us from the tropics about the middle of May, and extends its migrations north to the 49th parallel, where, however, it is rare. It is a shy solitary bird, breeding in this State, and laying from three to five bluish eggs speckled with brown. Feeds on insects and their larvæ; preferring, however, beetles, wasps, etc. They also eat berries and grapes. They leave this State in September, migrating by night.

(*EXTRA-LIMITAL.*)

P. ludoviciana. (AUD. B. of A. Vol. 3, pl. 210.) Greenish yellow. Head all round carmine red; back, wings and tail black; wings bifasciate with yellow. *Female:* head dull green; back, wings and tail brownish tinged with green. Length, 7 inches. *Louisiana.*

GENUS PLECTROPHANES. Meyer.

Bill short, somewhat compressed, robust: edges of the mandibles not notched. Roof of the mouth concave, with three prominent lines, of which the middle is elevated into an oblong tubercle. First or second primaries longest. Hind nail very long, and almost straight. Tail rather long, emarginate.

THE LAPLAND SNOW-BIRD.

Plectrophanes lapponicus.

PLATE LXIX. FIG. 159.

(STATE COLLECTION.)

Fringilla lapponica. Linnæus, Syst. Nat. 12 ed. p. 317. Pennant, Arct. Zool. Vol. 2, p. 377.
Plectrophanes calcaratus, Meyer. *E. id.* Rich. Parry's Second Voyage.
E. (Plectrophanes) lapponica. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 440. Id. Am. Orn. Vol. 2, p. 53, pl. 13, fig. 1 (male); fig. 2 (female). Audubon, fol. pl. 365. Nuttall, Man. Orn. Vol. 1, p. 463. Brewer, Synopsis, p. 706.
Plectrophanes id. Audubon, B. of A. Vol. 3, p. 50, pl. 152.
P. id., Lapland Lark Bunting. Giraud, Birds of Long island, p. 99.

Characteristics. *Spring plumage.* Head, chin and breast black; beneath white: a white line over the eye. Quills black: two outer tail-feathers black, with a white spot near the tip. *Winter.* Upper part of the head black, edged with rufous: neck black; the feathers tipped with white. *Female,* rufous grey above; beneath white. Length, 6½ inches.

Description. First quill longest. Tail deeply emarginate and rounded. Tail-feathers acuminate, and 0·8 longer than the tips of the closed wings.

Color. This varies with the season. In its winter dress, in which only we are enabled to see it, it is rufous brown above, striated with black. Quill-feathers blackish brown, with light rufous on the outer webs. A patch behind and beneath the eye, rufous, margined with blackish. Throat and breast obsoletely spotted with black beneath. Flanks whitish grey, with oblong rufous spots. *Female,* scarcely differs, except in the spot behind the eye being less obvious; the breast also is slightly darker.

Length, 6·5 – 7·0. Alar spread, 12·0.

This rare arctic bird is not an unfrequent visiter to this State, during the extreme cold of winter. In the winter of 1838, numbers were seen in the markets of New-York, having been shot on Long island. Mr. Audubon has indeed observed them in Kentucky and Missouri, but this must of course have been very rare. Feed on seeds and berries. Their nest is placed on the ground; the eggs, from five to seven, are pale yellow, spotted with brown. It lives habitually in the arctic regions of both continents, and has been observed as far north as the 74th parallel of latitude.

THE WHITE SNOW-BIRD.

PLECTROPHANES NIVALIS.

PLATE LXIX. FIG. 158.

(STATE COLLECTION.)

Emberiza nivalis. LINNÆUS, Syst. Nat. 12 ed. p. 308.
Snow Bunting. PENNANT, Arct. Zool. Vol. 2, p. 355. WILSON, Am. Orn. Vol. 3, p. 36, pl. 21, fig. 2 (female).
E. (Plectrophanes) id. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 103. RICH. & SWAINSON, F. B. A. Vol. 2, p. 246. AUDUBON, folio, pl. 189. NUTTALL, Man. Orn. Vol. 1, p. 458. SELBY, Am. Orn. Brewer's ed. p. 212. KIRTLAND, Zool. Ohio, p. 163. PEABODY, Zool. Mass. p. 318.
P. nivalis. AUDUBON, B. of A. Vol. 3, p. 55, pl. 155.
P. id., Snow Lark Bunting. GIRAUD, Birds of Long island, p. 97.

CHARACTERISTICS. Rufous brown above, striate with black. Quills white at the base; secondaries mostly white: three lateral white, tipped with blackish. *In full plumage:* head, neck and beneath white. *Female* and *young*, white, tinged with rufous. Length, $7\frac{1}{2}$ inches.

DESCRIPTION. Such variations in its markings occur, that scarcely any two individuals are alike. In this State, the following is the most usual appearance: Head, neck and beneath soiled white, tinged with brownish red. Summit of the head rufous, becoming lighter on the neck. A rufous dash under the eyes, often descending down along the neck, and forming an imperfect rufous collar around the breast. Above greyish brown, obsoletely streaked with black. All the tail-feathers edged with white. Outer vanes of the quills, and their tips, edged with white. Inner tail-feathers black. *Female* and *young*, dull grey beneath, and light rufous on the head and rump.

Length, 7·0 –7· 5. Alar spread, 13·0 – 13·5.

This bird, which is usually known in this State under the name of *White Snow-bird*, to distinguish it from the *Struthus hyemalis* or Common Snow-bird, is, like that and the preceding species, most abundant in the northern regions of the two continents. It usually appears in the Atlantic district of this State after a severe snow-storm, and has been observed in Maryland and Kentucky. It has been known to breed in Massachusetts and Maine, and probably will be found to do the like in the high mountainous regions of our northern district. The nest is placed on the ground, and contains 4 – 5 dull white eggs with numerous reddish brown spots, becoming confluent about the larger end. Feeds on grass-seeds, insects and minute shells. In some parts of the country, it is called *White-bird.*

(*EXTRA-LIMITAL.*)

P. pictus. (Aud. B. of A. Vol. 3, p. 52, pl. 153.) Head black: a line passing above and below the eye, a small spot on the nape, and a large patch on the wings white. Throat and all beneath yellow. Length, 6 inches. History incomplete. *Northern regions.*

P. ornatus. (Id. Ib. pl. 154.) Grey and spotted: a bright reddish belt over the neck. Line over the eye, and the two lateral tail-feathers white. Beneath, except the vent and throat, black. History incomplete. *Prairies of the Platte river.*

P. smithii. (Id. Ib. Vol. 7, p. 336, pl. 487.) Yellowish brown, streaked with dusky; clay-yellow beneath. Quills brownish black, edged with white. Two outer tail-feathers white. Length, 6·1. *Illinois.*

GENUS ALAUDA. Linnæus.

Bill short, straight, robust. Upper mandible convex above, smooth on its edges. Nostrils basal, oval, covered by the advancing feathers of the forehead. Tongue lacerated. Hind nail long, acute, nearly straight, generally stronger than the toe. Second and third quills longest. Two of the scapularies nearly as long as the quills. Tail usually emarginate. Feathers of the head more or less elongated, erectile.

THE HORNED LARK.

Alauda cornuta.

PLATE LXXIII. FIG. 165.

(STATE COLLECTION.)

Alauda alpestris, Lin. Syst. Nat. p. 289.
Shore Lark. Pennant, Arct. Zool. Vol. 2, p. 392.
A. campestris, Sky Lark. Bartram, p. 290.
A. alpestris. Wilson, Am. Orn. Vol. 1, p. 85, pl. 5, fig. 4. Bonaparte, Ann. Lyc. New-York, Vol. 2, p. 102. Audubon, folio, pl. 200. Nuttall, Man. Orn. Vol. 1, p. 455.
A. cornuta. Rich. & Swainson, F. B. A. Vol. 2, p. 245 (head figured). Kirt. Zool. Ohio, p. 183. Peabody, Zool. Mass. p. 318. Audubon, B. of Am. Vol. 3, p. 32, pl. 151.
Phileremos id. Bonaparte, Geograph. and Comp. List, p. 37.
A. alpestris, Shore Lark. Giraud, Birds of Long island, p. 95.

Characteristics. Head with erectile feathers. *Summer,* reddish. *Winter,* stripe under the eye, tips of crest and patch on the breast black; throat, sides and back of the neck yellow. *Female:* no crest; eye-stripe yellow. Length, $7\frac{1}{2}$ inches.

Description. Dusky brown above, streaked with lighter on the edges. Shoulders, flanks and thighs light reddish brown or vinaceous. Rump reddish. Tip of the yellow egret, and a few feathers on the crown, black. Frontlet, throat and neck yellow. Breast below the black crescent, spotted with black. All the tail-feathers, except the central pair, black. *Female:* Head plain brown, streaked with blackish; little or no black over the eye; breast reddish brown.

The *Horned Lark* is a northern species, which appears in this State in October, and is seen during the coldest weather. On the great plains of Suffolk and Queens, they are numerous at that time in flocks of twenty to thirty, and quite tame. It spreads farther south and west, having been observed by Kirtland in Ohio during the whole winter. It has been also seen in Texas. Its nest is placed on the ground, with olive white eggs sprinkled with minute darker spots. It has hitherto been confounded with the *Alauda alpestris* of Europe, from which it was first specifically and generically separated by Brehm, under the name of *Phileremos cornutus*. It was, however, first indicated as distinct by Richardson. Feeds on insects and grass-seeds, according to the season. It returns to the north in March. Ranges from 68° north to Texas.

(*EXTRA-LIMITAL.*)

A. rufa, Lath. Tail-feathers uniform blackish: throat pale yellow. Length, 5·5. *Texas.*

A. minor. (Giraud, B. of Texas, plate.) Crown black; occiput and hind neck reddish brown: a broad line of black from base of the mandibles, passing down the sides of the neck. Throat light yellow, with a broad black patch on the lower neck. Tail dark brown; two middle tail-feathers lighter. Length, 5·4. *Texas.*

A. spraguei. (Aud. B. of Am. Vol. 7, p. 334, pl. 486.) Light reddish brown above, streaked with blackish brown. Beneath yellowish, streaked with black on the sides. No erectile feathers on the head. Length, 6·0. *Upper Missouri.*

GENUS CORYTHUS. Cuvier.

Bill stout, thick, very convex above; the upper mandible bent over the lower. Palate with five prominent ridges. Tufts of bristly feathers at the base of the upper mandible. Nostrils concealed by bristly feathers. Tongue thick, obtuse, horny. Tarsus shorter than the middle toe. Wings short. Tail rather long, emarginate.

THE PINE BULFINCH.

CORYTHUS ENUCLEATOR.

PLATE LXII. FIG. 142 (YOUNG MALE).

(STATE COLLECTION.)

Loxia enucleator. Linnæus, Syst. Nat. p. 299. Pennant, Arct. Zool. Vol. 2, p. 348. Wilson, Am. Orn. Vol. 1, p. 80, pl. 5, fig. 2.

Pyrrhula id. Temminck, Man. Orn. Vol. 1, p. 333. Bonaparte, Ann. Lyc. Vol. 2, p. 115. Audubon, fol. pl. 358. Nuttall, Man. Orn. Vol. 1, p. 535.

Corythus id. Rich. & Swainson, F. B. A. Vol. 2, p. 262, pl. 53 (female). Audubon, B. of Am. Vol. 3, p. 178, pl. 199.

C. id., Pine Grosbeak. Giraud, Birds of Long island, p. 128.

Characteristics. Red. Wings and tail dark brown. *Female*, olive green; brighter on the head and rump. Length, 8½ inches.

Description. Second, third and fourth quills subequal. Tail deeply emarginate, two inches longer than the tips of the closed wings. Bill reddish brown. Claws black. Beneath light grey. *Female:* Bill dusky. Head and hind neck yellowish brown; each feather with a central dusky streak. Rump brownish yellow. Cheeks and throat yellowish. Beneath ash-grey.

Length, 8·5. Alar spread, 14·0.

This beautiful northern species visits sparingly the Atlantic district of this State during the autumn and winter; and as it breeds in Maine, will probably be found to do the same in our northern district. About twenty years ago, large flocks appeared in the neighborhood of New-York. They feed on buds, berries, and the seeds of the pine. The eggs are said to be pure white. Richardson describes his specimens as exceeding eleven inches, whereas none of the specimens in the State Collection exceed eight. In this country, the Pine Bulfinch ranges from the highest northern latitude to the 40th parallel. It is found in the northern parts of both continents.

GENUS LOXIA. Linnæus.

Mandibles crossing each other at the tips. Tongue short, entire and pointed. Palate with three ridges. Tarsus and middle toe subequal. Tail short, emarginate.

THE AMERICAN CROSSBILL.

Loxia americana.

PLATE LXIII. FIG. 144 (Young male).

(STATE COLLECTION.)

Curvirostra americana. Wilson, Am. Orn. Vol. 4, p. 44, pl. 31, figs. 1 and 2 (young and adult male).
Loxia id. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 117. Audubon, fol. pl. 197. Nuttall, Man. Orn. Vol. 1, p. 538. Kirtland, Zool. Ohio, p. 184. Peabody, Zool. Mass. p. 331.
L. curvirostra. Audubon, B. of Am. Vol. 3, p. 186, pl. 200.
L. americana. Bonaparte, Geographical and Comparative List, p. 38.
L. curvirostra. Giraud, Birds of Long island, p. 130.

Characteristics. Red. Wings and tail brownish; the former without bands. *Female* and *young*, greenish yellow. *Young after moulting*, dull reddish, with yellow on the rump and wings. Length, 7 inches.

Description. Bill compressed towards the tips. Tail about an inch longer than the tips of the closed wings. Tarsus short, compressed, acute behind; the two lateral toes shortest. Claws compressed, sharp, curved.

Color. This is described in the specific phrase. The red passes into whitish beneath.

Length, 6·5 – 7·0. Alar spread, 9·5 – 10·0.

This may be considered as a northern species, breeding in this State and as far south as Pennsylvania. The eggs are greenish white, thickly covered with brownish spots. It feeds on the cones of the hemlock (*Pinus canadensis*), and the buds of trees; also on apples and other fruits, which they break open for the seeds. In some of their habits, and the structure of their feet, they form a passage to the succeeding family. Bonaparte, and the best European ornithologists with him, consider this species as distinct from the common Crossbill of Europe, with which it has been hitherto confounded. Its geographical range along the Atlantic extends from Pennsylvania to the 57th parallel of north latitude; in the regions west of the Mississippi, it descends still lower.

THE WHITE-WINGED CROSSBILL.

LOXIA LEUCOPTERA.

PLATE LXIII. FIG. 145 (YOUNG MALE).

(STATE COLLECTION.)

Loxia leucoptera, GMELIN. PENNANT, Arct. Zool. Vol. 2, p. 347.
Curvirostra id. WILSON, Am. Orn. Vol. 4, p. 48, pl. 31, fig. 3 (young male).
Loxia id. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 117. ID. Am. Orn. Vol. 2, p. 84, pl. 15, fig. 3 (female). NUTTALL, Manual Orn. Vol. 1, p. 540. AUDUBON, fol. pl. 364. RICH. & SWAINSON, F. B. A. Vol. 2, p. 263. PEABODY, Mass. Rep. p. 331. AUDUBON, B. of A. Vol. 3, p. 190, pl. 201. GIRAUD, Birds of Long island, p. 131.

CHARACTERISTICS. Carmine red. Wings and tail black; the former with two white bands. *Female*, dusky olive; breast and rump yellow. Length, 6½ inches.

DESCRIPTION. The first, second and third quills longest. Tail deeply emarginate; the feathers acuminate, curved outwards, about an inch longer than the tips of the closed wings. Lower mandible shortest.

COLOR, included in the specific phrase; the posterior white band on the wings broadest. *Female*, the white bands on the wings narrow. *Young*, dull yellowish; beneath spotted and streaked with brown.

Length, 6·0 – 6·5. Alar spread, 10·5 – 11·0.

This is a northern species, which, although common enough along the shores of Lake Ontario, rarely descends to the southern part of the State, unless when impelled by the severity of the season: it then appears occasionally in large flocks. It probably breeds in this State, as a few have been observed to breed in New-Jersey and Pennsylvania. Its eggs are white, spotted with yellowish. It ranges from 40 to 68° north. Accidental in Europe.

(*EXTRA-LIMITAL.*)

FAMILY PSITTACIDÆ.

Bill large, short, high, convex above and below, with a cere at the base: upper mandible hooked at the tip; lower shortest. Nostrils open in the cere. Tongue fleshy, short and thick. Toes two before and two behind. Tail of twelve feathers.

Genus CONURUS, *Kuhl.* Edges of the upper mandible with a deep notch near the tip: lower mandible truncate. Tarsus very short. Second quill longest. Tail long, cuneate, of twelve narrow tapering feathers.

C. carolinensis, Parrakeet. (AUD. B. of A. Vol. 3, pl. 278.) Green. Cheeks red; remainder of the head, neck and throat yellow. *Young*, uniform green. Length, 14 inches. *Southern States.*

OBS. In the year 1795, a large flock of these birds was seen in the middle of winter, 25 miles northwest of Albany; probably transported by a whirlwind.

FAMILY PICIDÆ.

Bill stout, straight, angular: margins entire. Nostrils basal, elliptical or oblong, concealed by reversed feathers. Legs short. Toes usually four. Claws large, strong and much curved. Tail moderate, of ten or twelve feathers. Tongue slender, protractile, serrated towards the tip.

Obs. A well defined family, and abounding in species in the United States.

GENUS PICUS. Linnæus.

Bill in some species slightly curved; in others, perfectly straight. In some the head is furnished with a crest of feathers, while in others it is not so. In a few species, there are but three toes.

Obs. The twenty American species here described, have been arranged by modern systematists under seven genera. We shall include them under one.

THE CRESTED WOODPECKER.

Picus pileatus.

PLATE XVIII. FIG. 39.

(STATE COLLECTION.)

Picus pileatus. Linnæus, Syst. Nat. p. 173. Pennant, Arct. Zool. Vol. 2, p. 269. Wilson, Am. Orn. Vol. 4, p. 27, pl. 29, fig. 2 (male). Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 44. Audubon, folio pl. 111. Nuttall, Man. Orn. Vol. 1, p. 567.

P. (Dryotomus) id. Rich. & Swainson, F. B. A. Vol. 2, p. 304. Kirtland, Zool. Ohio, p. 162. Peabody, Zool. of Mass. p. 331.

P. id. Audubon, B. of A. Vol. 4, p. 226, pl. 257.

Characteristics. Crested. Brownish black. Crest and mustachios red. Chin, a stripe on each side of the neck, base of quills, and under wing-coverts greenish white. Length, 18 inches.

Description. Bill sharply carinate above, depressed towards the base; lateral carinæ distinct: mandibles equal. Fourth and fifth quills longest. Tail long, wedge-shaped; the feathers worn to a point, 2·5 longer than the tips of the closed wings.

Color. Black tinged with blue. A broad black stripe through the eye, and above this a narrow white stripe. Bristles covering the nostrils, black and yellow. Base of the secondaries, and the whole of the under wing-coverts sulphur-yellow. *Female:* anterior part of the crimson crest olive-brown; stripe from the base of the bill brown. Belly faintly barred with grey. Length, 18·0 – 20·0. Alar spread, 28·0 – 29·5.

This is the largest Woodpecker found in our State, and is particularly abundant in the uncleared forests, where he is known under the names of *Log-cock* and *Wood-cock*. It is almost unknown in the Atlantic district of the State. It feeds on the larvæ of insects, which it obtains from beneath the bark of trees, and on indian corn, chesnuts, acorns and fruits. Forms its nests in excavations in decaying trees; the eggs five or six in number, white. It occurs from Texas to the 63d parallel, and appears to be resident in every part of the United States during the whole year.

THE RED-HEADED WOODPECKER.

Picus erythrocephalus.

PLATE XVI. FIG. 34 (Male).

(STATE COLLECTION.)

Picus erythrocephalus. Linnæus, Syst. Nat. p. 174. Pennant, Arct. Zool. Vol. 2, p. 271. Wilson, Am. Orn. Vol. 1, p. 142, pl. 9, fig. 1. Audubon, fol. pl. 27. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 45. Nuttall, Man. Orn. Vol. 1, p. 569.

Melanerpes id. Rich. & Swainson, F. B. A. Vol. 2, p. 316. Kirtland, Zool. Ohio, p. 162. Peabody, Mass. Rep. p. 335. Audubon, B. of A. Vol. 4, p. 274, pl. 271.

P. id. Giraud, Birds of Long Island, p. 130.

Characteristics. Head, neck and throat crimson. Back, wings and tail black. Secondaries, rump and all beneath white. *Young*, brown barred with grey; secondaries barred with black. Length, 8 – 9 inches.

Description. Lateral carinæ on the upper mandible extending far forward. Tips of both mandibles truncated. Second, third and fourth quills longest, subequal. Tail short, rounded, with ragged acute tips extending 0·8 beyond the tips of the wings. Claws much incurved.

Color. The back with purplish reflections. Two outer tail-feathers tipped with white. A narrow band of black at the base of the red neck. Shafts of the secondaries black. Breast and belly white, with a slight reddish brown tinge. *Young*, barred with grey and dark brown; head, chin and throat brown, streaked with black: traces more or less distinct of red.

Length, 8·5 – 9·0. Alar spread, 16·0 – 17·0.

The *Red-headed Woodpecker*, or, as he is sometimes called, the *Red-head*, arrives in this State from the South in the early part of May, and, after breeding, leaves us again in September: occasionally a few remain during the winter. It feeds on juicy fruits, as cherries, apples, pears, etc.; on indian corn in the milk, and on the insects which infest decaying trees. The eggs are white, with reddish spots at the larger end. It occurs at Columbia river, and ranges from Mexico to the 50th parallel of north latitude. From the observations of Mr. Giraud, it is less common now in the Atlantic district of this State than formerly.

THE HAIRY WOODPECKER.

PICUS VILLOSUS.

PLATE XV. FIG. 32 (MALE).

(STATE COLLECTION.)

Picus villosus, LINNÆUS, Syst. Nat. p. 175. *Hairy Woodpecker*, PENNANT, Arct. Zool. Vol. 2, p. 273.
P. id. SABINE, Franklin's Journey. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 46. AUDUBON, fol. pl. 416.
P. (Dendrocopus) id. RICH. & SWAINSON, F. B. A. Vol. 2, p. 305. KIRTLAND, Zool. Ohio, p. 162. PEABODY. Mass. Rep. p. 337. AUDUBON, B. of A. Vol. 4, p. 244, pl. 262; and *canadensis*, ID. Vol. 4, p. 235, pl. 258.
P. villosus et *canadensis*. GIRAUD, Birds of Long island, pp. 174, 176.

CHARACTERISTICS. Varied with black and white; beneath white. Back with long slender loose feathers. Two external tail-feathers white. A red occipital band. *Female*, no red occipital band. Length, 8½ inches.

DESCRIPTION. Bill as long as the head, straight: upper mandible with a carina on each side. Tarsus short, feathered above. Claws acute, channelled, dilated on their edges. First quill shortest; fourth and fifth longest. Tail moderate, concave, wedge-shaped; the middle feathers pointed.

COLOR. Above black, varied with white; the wings spotted with white, and representing interrupted bands: along the back, the white predominates. Frontlet with bristly cream-colored feathers, intermixed with black ones, and covering the nostrils. Front of the head, eye-stripe and a triangular stripe on the sides of the neck, black. Occiput with a scarlet band. Outer tail-feathers black at their bases, rufous or reddish white towards their tips; the two outer being nearly wholly white. *Female*, more tinged with brown, and without the red patch on the head; somewhat smaller.

Length, 8·0. Alar spread, 15·0.

The *Hairy Woodpecker* is a constant resident in this State during the whole year. The eggs are white, unspotted. It feeds on insects and their larvæ, which infest trees. Its range extends from Texas to the 63d parallel of north latitude.

Audubon has figured the male of a species which he names *canadensis*, and which appears to differ only from the above in being larger, with the fourth toe slightly longer, and the bill proportionally stouter. He himself admits that "it differs in no appreciable degree either in form or color from *P. villosus*, which it also resembles in the texture of its plumage, and in the relative proportion of the quills and tail-feathers."

THE DOWNY WOODPECKER.

Picus pubescens.

PLATE XVI. FIG. 35.

(STATE COLLECTION.)

Picus pubescens. Linnæus, Syst. Nat. p. 175. Pennant, Arct. Zool. Vol. 2, p. 274. Wilson, Am. Orn. Vol. 1, p. 153, pl. 9, fig. 4. Vieillot, Ois. de l'Am. Vol. 2, p. 65, pl. 121 (male). Bonaparte, Ann. Lyc. Vol. 2, p. 46. Audubon, fol. pl. 112. Nuttall, Man. Orn. Vol. 1, p 576.
P. (Dendrocopus) id. Rich. & Swainson, F. B. A. Vol. 2, p. 307. Kirtland, Zool. Ohio. p. 179. Peabody, Mass. Rep. p. 337. Audubon, B. of Am. Vol. 4, p. 249, pl. 263; *gairdneri?* Id. p. 252.
P. (Dendrocopus) pubescens. Bonaparte, Geographical and Comp. List, p. 39.
P. id. Giraud, Birds of Long Island, p. 177.

Characteristics. Resembles the preceding. Six white bars on the wings. Three outer tail-feathers on each side white. A narrow red occipital band, which in the *female* is white. Length, 6 – 7 inches.

Description. Third and fourth quills longest, subequal. Tail wedge-shaped, of ten tapering pointed feathers.

Color. Above black, varied with white. Summit of the head, eye-stripe, and below the cheeks black. A band over the eye, and one beneath, white. Wings brownish, with square white spots on the outer vanes, and round ones on the inner ones, and also on the tips, which form six narrow transverse bars. Dull white beneath. *Female*, brownish white beneath; occipital band white.

Length, 6·5 – 7·0.

This species, which is a resident in this State during the whole year, is better known under the name of *Sapsucker*, from a common belief that it sucks the sap of trees. In looking at a fruit tree, for instance, we may frequently see a series of holes completely and regularly encircling the trunk, and which are made by this species. The popular belief is, that the bird makes these holes to suck out the sap; and one ornithologist at least (Dr. Kirtland) countenances this belief. All other naturalists assert that it is only in search of insects; and the structure of its tongue, which is barbed at the tip, like all the other species, strengthens this opinion. It has been suggested that these holes are made in order to attract insects to the overflowing sap, and thus to ensure their capture. It may, however, occasionally, by its regular systematic attack on a tree, perform an operation analogous to *girdling*, and thus incidentally be injurious. Its food consists of insects and their larvæ, and fruits, such as grapes and berries, especially those of the poke-weed. Eggs white immaculate. It ranges from Texas to the 58th parallel of north latitude.

Mr. Audubon has described, under the name of *gairdneri*, a bird scarcely to be distinguished from this species, except that the fourth toe is somewhat longer, the bill stouter, and the fifth quill longest.

THE YELLOW-BELLIED WOODPECKER.

Picus varius.

PLATE XVIII. FIG. 38.

(STATE COLLECTION.)

Picus varius. Linnæus, Syst. Nat. p. 176. Pennant, Arct. Zool. Vol. 2, p. 275. Wilson, Am. Orn. Vol. 1, p. 147, pl. 9, fig. 2 (male). Vieillot, Ois. de l'Am. Vol. 2, p. 63, pl. 118 (adult male); pl. 119 (young). Bonaparte, Ann. Lyc. Vol. 2, p. 45. Id. Am. Orn. Vol. 1, p. 75, figs. 1 and 2 (young). Audubon, fol. pl. 190. Nuttall, Man. Orn. Vol. 1, p. 574.

P. (Dendrocopus) id. Rich. & Swainson, F. B. A. Vol. 2, p. 309. Kirtland, Zool. Ohio, p. 179. Peabody, Mass. Rep. p. 336. Audubon, B. of Am. Vol. 4, p. 263, pl. 267.

Characteristics. Crown and front of the throat crimson. Breast and belly greenish yellow. Throat and upper part of the back black. *Female:* Throat and hind head whitish. *Young:* White band on the wings; head brown, barred with black. Length, 8½ inches.

Description. An oblique carina on each side of the upper mandible. First quill very short; second and third longest. Tail wedge-shaped, concave, with ten acute feathers, scarcely 0·9 longer than the tips of the closed wings.

Color. A light stripe over the eye, bounded above with black. The red on the throat bounded with black, which unites below in a large crescent-shaped black patch with purplish reflexions. Above black, varied with greenish white. Scapulars black, tinged with green. Quills black. Tail-feathers margined with reddish white; the two central feathers white on a part of their inner webs, with two black spots like bars. *Female*, resembles the male in its red head and other particulars. Chin and throat white, bounded with black. Black spots on both vanes of the central tail-feathers. *Young male* (August 10): Breast varied with brown and black. Head brown, streaked with black. One or two small red feathers diluted on the head. *Young female* of the second year: Breast black; crown purple, with a few reddish feathers.

Length, 8·0 – 8·5. Alar spread, 14·0 – 15·0.

This species comes to us from the South in the spring, and remains in this State during the summer, where it breeds, and then migrates southwardly in the autumn. Eggs white unspotted. Food, insects, worms and berries. It ranges from Mexico to the 61st parallel, and is a permanent resident near the Atlantic from Maryland south. In the interior, it is not a resident so far north.

THE RED-BELLIED WOODPECKER.

PICUS CAROLINUS.

PLATE XVII. FIG. 37.

(STATE COLLECTION.)

Picus carolinus. LINNÆUS, Syst. Nat. p. 174. PENNANT, Arct. Zool. Vol. 2, p. 272. WILSON, Am. Orn. Vol. 1, p. 113, pl. 7, fig. 2 (male). AUDUBON, folio, pl. 415. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 45. NUTTALL, Man. Ornith. Vol. 1, p. 572. PEABODY, Birds of Mass. p. 336, AUD. B. of A. Vol. 4, p. 269, pl. 270.

Centurus id. SWAINSON & BONAPARTE.

CHARACTERISTICS. Above barred with black and white. Cheeks and parts beneath pale buff. Head and neck above red. Belly tinged with red. *Female*, smaller; head in front not red. Length, 8 – 9 inches.

DESCRIPTION. Bill nearly straight: a keel on each side of the upper mandible, near the summit. Tarsus feathered in front half way down. Claws sharp, curved, laterally grooved. Tail 1·3 longer than the tips of the closed wings.

COLOR. Rump and tail-coverts white, barred with black. Both vanes of the middle tail-feathers white, and barred with black on the inner vanes; the next three black, slightly tipped with white; the outer tipped or barred with white. *Female*, ash grey on the anterior part of the summit of the head, and the lower parts less tinged with red.

Length, 8·5 – 10·0.

This beautiful species also comes to us from the South in the spring, and advances as far north as Canada. It is not at present very abundant in this State. Dr. Emmons observed it breeding in Massachusetts; and although I have not observed it myself, there can be no doubt but that it also breeds in this State. Its incubation and food as in the preceding. It leaves us in the autumn, and is a constant resident from Carolina south. It is thought to have gradually become less abundant in this and the adjacent States. Ranges from Texas to Canada.

THE ARCTIC WOODPECKER.

Picus arcticus.

PLATE XVII. FIG. 36 (Male).

(STATE COLLECTION.)

Picus tridactylus. Bonaparte, Annals Lyceum N. Y. Vol. 2, p. 46. Id. Am. Orn. Vol. 2, p. 64, pl. 14, fig. 2. Audubon, fol. pl. 132. Nuttall, Manual Ornith. Vol. 1, p. 578.

P. (Apternus) arcticus. Rich. & Swainson, F. B. A. Vol. 2, p. 313, pl. 57. Audubon, B. of Am. Vol. 4, p. 266, pl. 268.

Apternus arcticus. Bonaparte, Geog. and Comp. List, p. 39.

Characteristics. Three-toed. Crown yellow. A white band from the mandible passes under the eye. Outer tail-feathers white and rufous. *Female*, without yellow crown. Length, 10½ inches.

Description. Bill nearly as long as the head, straight, pointed, and much depressed. Tarsus scutellate before and behind. Tail graduated, of twelve decurved feathers; the outer very small and rounded. First primary longer than the seventh. Feathers of the head silky.

Color. Chin, throat and front of the breast white; behind this, barred with black. Crown yellow, verging to orange. Outer quills with seven rows of white spots. Two middle tail-feathers black; the two outer barred with white and black; the others black, white and cream colored. *Female*, without the yellow crown; the white behind the eye conspicuous.

Length, 10·5. Alar spread, 16·0.

This northern bird is a rare species in the Atlantic district of the State, although it has been seen in Pennsylvania. I noticed numbers of them in the mountainous forests of Hamilton and Herkimer counties in June, and they have been seen at Niagara. The eggs are pure white. They feed on the tree-boring insects. It doubtless breeds in this State, which appears to be its extreme southern range. This with the following have been arranged under the genus Apternus, principally characterized by its three toes and depressed bill. For a long time it had been confounded with the *P. tridactylus*, or *Arctic Woodpecker* of Europe. Until very recently, too, it has been confounded with the following arctic species. Geographical range from New-York to the Arctic regions.

THE BANDED WOODPECKER.

Picus hirsutus.

Picus hirsutus. Vieillot, Ois. de l'Am. Vol. 2, p. 68, pl. 124 (adult male).
P. tridactylus. Rich. & Swainson, F. B. A. Vol. 2, p. 311, pl. 56 (young). Audubon, fol. pl. 417. Id. B. of Am. Vol 4, p. 268, pl. 269.

Characteristics. Three-toed. Crown yellow: back barred, black and white; tufts of yellowish hairs over the nostrils. *Female:* crown black, spotted with white. Length, 9 inches.

Description. Very closely allied to the preceding in its markings. Beside the characters noted in the specific phrase, I may notice that the tarsus is feathered in front, and a tuft of stiff hairs project forward from the base and angles of the mandibles.

Color. Crown yellow, spotted with white. Throat and beneath white, barred with black on the flanks. Four middle tail-feathers black; outer feathers white. *Female*, smaller; head black, with white spots.

Length, 9·0. Alar spread, 15·0.

This is a rare northern species, which I have not yet detected in this State. I think I have seen it in Mr. Ward's collection; but he as well as myself supposed it to be the young of the foregoing species. It was obtained in the northern part of the State. Audubon describes it from a specimen in the collection of the Zoological Society, London. It ranges from the Lakes northwardly to the Arctic circle.

THE CLAPE, OR GOLDEN-WINGED WOODPECKER.

Picus auratus.

PLATE XV. FIG. 33.

(STATE COLLECTION.)

Picus auratus. Linnæus, Syst. Nat. p. 174. Pennant, Arct. Zool. Vol. 2, p. 270. Wilson, Am. Orn. Vol. 1, p. 45, pl. 3, fig. 1. Vieillot, Ois. de l'Am. pl. 100. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 44. Audubon, fol. pl. 37. Nuttall, Man. Orn. Vol. 1, p. 561.

Colaptes id. Rich. & Swainson, F. B. A. Vol. 2, p. 314. Kirtland, Zool. Ohio, p. 162. Peabody, Mass. Rep. p. 333. Audubon, B. of A. Vol. 4, p. 282, pl. 273.

Colaptes auratus. Bonaparte, Geog. and Comp. List, p. 40.

Picus id., Golden-winged Woodpecker. Giraud, Birds of Long island, p. 181.

Characteristics. Brown, barred with black: a black crescent on the breast: a red occipital band: shafts of the wings and tail yellow. *Female*, no black streak on the chin. *Young*, without the black crescent. Length, 12–13 inches.

Description. Bill compressed, carinate, smooth and curved. First quill very small; third and fourth longest. Tail-feathers ten, broad and acute, extending 2·1 beyond the tips of the closed wings.

Color. Head and neck bluish grey: a transverse red band across the back part of the neck. Upper parts brown, spotted with black. A black streak on each side of the cinnamon-colored neck, and a black lunated spot on the breast. Belly white, spotted with black. Under side of the wings salmon-colored; of the tail, saffron-yellow: the tips black; in some, bordered with dull whitish. Rump white; tail above black. *Female*, the black lunate spot on the breast smaller, and the lateral streaks on the throat wanting.

Length, 12·0 – 13·0. Alar extent, 17·0 – 19·0.

This species, from the extreme beauty of its plumage, has attracted general attention, and received many popular names in different districts. It is called *High-hole*, *Yucker*, *Flicker*, *Wake-up*, and *Pigeon Woodpecker*, and usually *Clape* in this State. This last I suppose to be some provincial word, introduced by the early English colonists. In Louisiana, *Pique-bois jaune*. Its food, incubation and habits as in the preceding. It is a southern species, residing in the Southern States during the whole year, and ranging across the whole continent between the parallels of 25° and 63° north latitude. In this State, it often remains until the winter has fairly set in, and a few remain during the year. Although occasionally feeding on indian corn, it is, like all its congeners, of great benefit to man.

(*EXTRA-LIMITAL.*)

* Crested.

P. imperialis, Gould. (Not figured.) Shining greenish black. Crest scarlet: a triangular spot on the back; secondaries and inner webs of primaries white; bristles of the nostrils black. Length, two feet; the largest of the genus. *Rocky mountains, California.*

P. principalis. (Aud. B. of A. Vol. 4, p. 214, pl. 256.) Violet-black. Crest red and black; secondaries, rump and a stripe on each side white; nasal bristles white. *Female:* crest black. Length, 21 inches. *From North Carolina southwardly.*

P. lineatus. (Id. Ib. p. 233, not figured.) Head scarlet: a crimson patch on the chin; throat yellowish white; a white band from the nostrils down the neck; breast black. Beneath whitish, barred with black. Length, 15 inches. *Columbia river.*

** Not Crested.

P. ruber. (Id. Ib. pl. 266.) Entire head, neck and breast carmine red; beneath yellow. Wings dusky, with a white patch. Length, 9 inches. *Columbia river.*

P. harrisi. (Id. Ib. p. 261. Giraud, Texas.) Head, eye-stripe and all above black: a red occipital band: a white stripe above and beneath the eye; quills barred and tipped with black; beneath brownish white. *Female:* no red occipital band. Length, 9 inches. *Columbia river* and *Texas.*

P. querulus. (Id. Ib. p. 254, pl. 264.) Black, barred above with white: sides of the head white, with a short red line above it; outer tail-feathers white spotted with black. *Female*, no red line on the head. Length, 8½ inches. *From New-Jersey southwardly.* Allied to *carolinus.*

P. auduboni. (Id. Ib. p. 259, pl. 265.) Head and eye-stripe black, with a yellow patch on the crown: four middle tail-feathers black: quills spotted with white; beneath white. Allied to *pubescens.* Length, 7 inches. *Louisiana.*

P. martini. (Id. Ib. pl. 260.) Barred above with white and black. Frontlet, back of the head and eye-stripe black. Crown red: a line above the eye, one beneath meeting on the hind head, and all the lower parts dusky white. Length, 9 inches. *Canada.*

P. torquatus. (Id. Ib. p. 280, pl. 272.) Greenish black. Front, cheeks and belly bright vermilion; collar round the neck and breast white. *Female:* throat and breast greyish white, with dusky sagittate spots. Length, 11 inches. *Columbia river.*

P. mexicanus. (Id. Ib. pl. 274. Giraud, Texas.) Brown above, barred with black; under side of wings and tail, and shafts of the quills red; hind part of the back white: a red patch at the angles of the mouth. *Female*, no red patch. Allied to *auratus.* Length, 13½ inches. *Texas* and *Columbia river.*

P. medianus. (Nut. Man. Orn. Vol. 2, p. 601.) Varied with black and white: crown black; hind head red, and both spotted with white; second quill much longer than the seventh. *Female:* head wholly black. Confounded with *pubescens*, with which it may prove identical. *Middle States.*

P. ayresi. (Aud. B. of A. Vol. 7, p. 348, pl. 494.) A red dash from the base of the bill down each side of the throat, and a similar transverse band on the hind neck. Allied to *auratus.* Length, 12·5. *Upper Missouri.*

FAMILY CUCULIDÆ.

Bill long or moderate, slightly curved at the tip. Tongue short, simple, lacerated at the tip. Feet short or moderate. Tarsus with broad scutellæ. Toes long and slender; the fore toes entirely cleft; outer hind toe versatile. Tail cuneate or wedge-shaped, of from 8 *to* 10 *feathers.*

GENUS COCCYZUS. Vieillot.

Bill rather long, compressed, with a ridge, and slightly bent from the base. Nostrils basal, oval, half covered by a naked membrane. Tarsus much longer than the middle toe. Wings short, somewhat rounded: first quill short; second, third and fourth longest. Tail very long, cuneate or graduated, of ten feathers.

THE YELLOW-BILLED CUCKOO.

Coccyzus americanus.

PLATE XIV. FIG. 30.

(STATE COLLECTION.)

Cuculus americanus. Linnæus, Syst. Nat. p. 170. Pennant, Arct. Zool. Vol. 2, p. 265.
C. carolinensis. Wilson, Am. Orn. Vol. 4, p. 13, pl 23, fig. 1.
Coccyzus americanus, Vieillot. Bonaparte, Ann. Lyc. Vol. 2, p. 42. Audubon, folio pl. 2. Nut. Man. Orn. Vol. 1. p. 551. Kirtland, Zool. Ohio, p. 162. Peabody, Mass. Rep. p. 332. Aud. B. of A. Vol. 4, p. 293, pl. 275.
Erythrophrys id. Bonaparte, Geog. and Comp. List, p. 40.
Coccyzus id. Giraud, Birds of Long island, p. 182.

Characteristics. Greyish brown above; beneath white. Lower mandible yellow. Inner vanes of the quills yellow. Length, 12 inches.

Description. Bill long, arched, acute. Second quill longest; the first shorter than the fourth. Nostrils linear, elliptical. Tail 5·3 long, graduated, 2·5 longer than the tips of the closed wings: the two outer feathers scarcely half the length of the central pair.

Color. With the exception of the first two quills, the others are reddish cinnamon on their inner vanes. The lower mandible yellow, dusky at the tip. Two central feathers of the tail similar in color to the back, but darker towards their tips; the others dusky, tipped with white. Irides hazel: eyelids yellowish or dusky. *Female,* larger; the four central tail-feathers unspotted.

Length, 11·5 – 12·5. Alar spread, 15·5 – 16·0.

This is not a very common bird, but it is found during the summer in every part of this State. It is a constant resident in the Southern States, and appears with us in the early part

of May, when it breeds, and leaves us in the autumn. The eggs are bluish green and unspotted. It is called *Cuckoo*, *Rain Crow*, and *Cow-bird*. It feeds on hairy caterpillars and large beetles; also on berries, grapes and occasionally the eggs of other birds. Mr. Giraud has noticed its own peculiar nest, and thinks it does not resemble in its habits its European congener. It ranges from Mexico to Labrador, and to the River Columbia along the shores of the Pacific. It is accidental in Europe.

THE BLACK-BILLED CUCKOO.

Coccyzus erythrophthalmus.

PLATE XIV. FIG. 31.

(STATE COLLECTION.)

Cuculus erythrophthalmus. Wilson, Am. Orn. Vol. 4, p. 16, pl. 28, fig. 2.
Coccyzus id. Vieillot. Bonaparte, Ann. Lyc. Vol. 2, pp. 42 and 437. Audubon, fol. pl. 32.
C. dominicus. Nuttall, Man. Orn. Vol. 1, p. 556. Kirtland, Zool. Ohio, p. 162. Peabody, Mass. Rep. p. 333.
Erythrophrys id. Sw. Bonaparte, Geog. List, p. 40. Audubon, B. of Am. Vol. 4, p. 330, pl. 276.
Black-billed Cuckoo. Giraud, Birds of Long island, p. 183.

Characteristics. Upper mandible brownish black; lower bluish. Beneath dusky white. A naked red space round the eye. Length, 12 inches.

Description. Bill scarcely as robust as in the preceding, but similar in shape. Tail 5·5 long, extending 3·6 beyond the tips of the closed wings. The third primary longest.

Color, as in the preceding species. The central tail-feathers of the same color with the back; the terminal white spots narrow, bordered with dusky. A crimson red bare space around the eye. Under side of the wings soiled drab, with a tinge of the same on the chin and lower tail-coverts. *Female*, with obsolete dusky bars on the tail, only visible in certain lights.

Length, 11·5 – 12·5. Alar extent, 15·0 – 16·0.

This species, which is often confounded with the preceding, appears in this State from the South about the same time, or somewhat later. It appears to prefer swamps, the borders of rivers and salt-ponds; living upon minute shellfish and animals, in addition to fruit, berries, etc. It ranges from Texas to Labrador, and appears to be a resident from Florida southwardly. It breeds in this State, and leaves us in the autumn.

(*EXTRA-LIMITAL.*)

C. seniculus. (Aud. B. of Am. Vol. 4, p. 303, pl. 277.) Light greenish brown; beneath dark brownish orange. Lower mandible yellowish at the base. Tail-feathers tipped with white. Length, 12 inches. *Florida Keys.*

FAMILY COLUMBIDÆ.

Claws robust, short, rather blunt. Hind toe present, and articulated nearly on the same plane with the others. Tarsi short, without spurs. Tail of twelve feathers. Bill moderate, compressed, straight, deflected at the tip. Upper mandible covered at the base with a soft membrane, in which the nostrils are pierced. Toes entirely divided.

GENUS ECTOPISTES. Swainson.

Bill rather slender. Wings long and pointed; the two first quills subequal, longest. Lateral toes unequal; the inner one longest. Tail long, wedge-shaped and pointed, of 12 or 14 feathers.

THE WILD PIGEON.

Ectopistes migratoria.

PLATE LXXIV. FIG. 167.

(STATE COLLECTION.)

Columba migratoria. Linnæus, Syst. Nat. p. 285; *canadensis*, p. 284 (female). Pennant, Arct. Zool. Vol. 2, p. 322, pl. 14, No. 187. Wilson, Am. Orn. Vol. 5, p. 102, pl. 44, fig. 1. Audubon, fol. pl. 62. Dewitt Clinton, Med. and Phil. Reg. Vol. 2, p. 210. Nuttall, Man. Orn. Vol. 1, p. 628.

Ectopistes id. Rich. & Swainson, F. B. A. Vol. 2, p. 362. Kirtland, Zool. Ohio, p. 164. Peabody, Mass. Rep. p. 351.

E. migratoria. Bonaparte, Geog. and Comp. List, p. 41. Audubon, Birds of Am. Vol. 5, p. 25, pl. 285.

E. id., Wandering Long-tailed Dove. Giraud, Birds of Long island, p. 184.

Characteristics. Bluish grey. Throat, breast and sides vinaceous. Tail of twelve feathers: the two middle ones black; the others whitish. *Female*, colors more dull; breast ash brown. *Young*, dull grey spotted with whitish. Length, 16 to 18 inches.

Description. Tail long, extending three and occasionally four inches beyond the tips of the closed wings.

Color. Bill black. Iris bright red. Head and sides of the neck bluish, with metallic reflexions. Above greyish blue. Throat, breast and sides brownish red or vinaceous. Wings and two central tail-feathers blackish; the former edged with rufous. A few black spots on the upper wing-coverts. Lateral tail-feathers blue at the base, and white towards the tips. Feet red; claws black.

Length, 16·0 – 18·0. Alar spread, 23·0 – 25·0.

The *Wild Pigeon*, as it is universally called in this country, breeds in this State, where it is found at all seasons of the year. In certain years they make their appearance in almost incredible numbers, literally darkening the air, and breaking down trees with their weight. Their appearance and disappearance is at very irregular and uncertain intervals, and although in a great measure connected with a search for food, does not always seem to depend upon that cause. Thus in February, 1742,* when the Hudson was frozen solid at New-York, and the snow a foot deep, flocks of these birds appeared in greater numbers than were ever before known. Large flocks were also observed about Albany, and in the northern parts of the State, during the winter of 1819. Mr. Clark of Albany succeeded in raising the Wild Pigeon in confinement; and from his successful experiments, we learn that it lays two eggs, and sets fifteen days. In eight days after being hatched, they are completely feathered, and fly from the nests. They have three or four broods between May and September. The same success has attended the experiments of Lord Stanley in England, upon a number sent out to him from this country. It is very desirable to domesticate this very prolific species, although its extremely erratic disposition will probably render this difficult. Its food consists of beech-nuts, acorns, berries, rice, seeds, etc. It ranges throughout North America, from 25° to 62° north latitude.

THE CAROLINA TURTLE DOVE.

Ectopistes carolinensis.

PLATE LXXIV. FIG. 166.

(STATE COLLECTION.)

Columba carolinensis. Linnæus, Syst. Nat. p. 286. Pennant, Arct. Zool. Vol. 2, p. 326, pl. 14. Wilson, Am. Orn. Vol. 5, p. 91, pl. 43, fig. 1. Bonaparte, Ann. Lyc. Nat. Hist. N. Y. Vol. 2, p. 119. Nuttall, Man. Orn. Vol. 1, p. 626. Audubon, fol. pl. 17.

Ectopistes id. Swains. Kirtland, Zool. Ohio, p. 164. Peabody, Mass. Rep. p. 350. Audubon, B. of Am. Vol. 5, p. 36, pl. 286. Giraud, Birds of Long island, p. 186.

Characteristics. Forehead and breast light reddish: a black spot under each ear. Tail of fourteen feathers; four of the lateral ones black near the extremities, white at the tip. Length, 12 inches.

Description. Bill with a tumid fleshy covering. Nostrils medial, elongated. Upper mandible feeby declinate at the tip. Tail with the two middle feathers extending three inches beyond the tips of the wings.

Color. Iris hazel. Crown and upper part of the head bright greenish blue; sides of the neck with green and golden metallic reflexions. Above brownish drab. Wing-coverts sparsely

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* See "Remarks on the *Columba migratoria*, or *Passenger Pigeon*;" in a letter to John W. Francis, M. D., from Dewitt Clinton, Esq. (*Medical and Philosophical Register, New-York*, Vol. 2, p. 210.)

spotted with black. All the tail-feathers, except the central pair, have a spot of black about an inch from their extremities; the intermediate space to the tips varying from white to greenish white. Flanks and beneath the wings blue. *Female*, colors not so brilliant; head colored similar to the back.

Length, 11·5 – 12·0. Alar spread, 16·5 – 17·0.

This beautiful Dove is found in this State from April to September, and breeds here, laying two white eggs. It breeds freely in confinement. The nest is either on the ground, or on some low tree. Feeds on fruits, berries and grain. A constant resident from Pennsylvania southwardly. Ranges from Mexico to Massachusetts, and along the Pacific to Columbia river.

(*EXTRA-LIMITAL.*)

Genus Columba, *Linnæus.* Tail short, even, of twelve feathers.

C. livia. The Common Pigeon. Introduced and domesticated. Bluish ash. Sides of the neck glossed with greenish reflexions. Rump white; tip of the tail black. Many varieties.

C. fasciata. (Bonap. Am. Orn. Vol. 1, pl. 8.) Purplish grey. Bill yellow; black at the tip. A white band behind the head. Tail with a broad blackish bar near the middle. Length, 16 inches. *Rocky mountains.*

C. leucocephala. (Aud. B. of A. Vol. 4, pl. 280.) Slate blue. Crown cream-white. Tail even. Length, 14½ inches. *Florida Keys.*

C. zenaida. (Id. Ib. Vol. 5, pl. 281.) Brownish-ash above; beneath light rufous: an amethystine spot under each ear. Tail with a black band; lateral tail-feathers tipped with whitish. Length, 11½ inches. *Florida Keys.*

C. montana. (Aud. Ib. Vol. 5, pl. 282.) Brownish red. Forehead, and a band running behind the eye, light reddish brown: a broad white band from the lower mandible, beneath the eye. Length, 12 inches. *Florida Keys.*

C. passerina. (Id. Ib. Vol. 5, pl. 283.) Scapulars with dark spots. Tail rounded; lateral tail-feathers black, tipped with white. Bill black at the tip, and with the feet yellow. The smallest American species. Length, 6 – 7 inches. *From North-Carolina southward.*

C. cyanocephala. (Id. Ib. Vol. 5, pl. 284.) Chocolate-color. Upper part of the head bright blue, encircled by a band of deep black. Sides spotted with bright blue. Length, 12 inches. *Florida Keys.*

C. trudeaui. (Id. Ib. Vol. 7, p. 352, pl. 496.) Shoulders, back and two middle tail-feathers olive brown: a large patch of white on the wings; a black spot on the sides of the neck. Length, 10·5. *Texas.*

ORDER III. GALLINÆ.

Bill short, hard and convex. Upper mandible vaulted, curved from the base or only at the point. Nostrils lateral, half covered by an arched rigid membrane, Feet stout. Tibia entirely feathered. Toes usually three before, and generally one behind, which scarcely touches the ground, sometimes wanting. Nails without any retractile motion. Tail of from ten to eighteen feathers, very rarely wanting.

FAMILY PHASIANIDÆ.

Hind toe present, elevated above the others. Tarsi generally armed with spurs. Tail of more than twelve feathers. Head more or less naked. Bill short and thick.

GENUS MELEAGRIS. Linnæus.

Bill short and thick; its base covered with a naked membrane, which, on the summit of the head, is elongated into a fleshy erectile conic hairy appendage. Head and neck naked; throat with a pendulous caruneulated wattle. Tarsi (of the male) armed with spurs. Tail broad, expansile, with from fourteen to eighteen feathers.

THE WILD TURKEY.

Meleagris gallopavo.

PLATE LXXVI. FIG. 172 (Male).

Meleagris gallopavo. Linnæus, Syst. Nat. p. 268. Pennant, Arct. Zool. Vol. 2, p. 291.
M. americanus. Bartram, p. 290.
M. gallopavo. Temminck, Pig. et Gall. Vol. 2, p. 374, and Vol. 3, p. 677. Bonaparte, Am. Orn. Vol. 1, p. 79, pl. 9; Ann. Lyc. N. Y. Vol. 2, p. 123. Audubon, fol. pl. 1 and 6. Nuttall, Man. Orn. Vol. 1, p. 630. Kirtland, Zool. Ohio, p. 164. Peabody, Mass. Rep. p. 352. Audubon, B. of A. Vol. 5, p. 42, pl. 287, and 288.

Characteristics. Blackish, with metallic coppery reflexions. Quills dusky, banded with white. Tail of eighteen feathers, rust-colored, with dark narrow bars, and with a broad black band near the tip. *Female* and *young*, dusky brownish, with few metallic tints. Length, 3½ – 4 feet.

Description. Nostrils oblique, linear. A pendulous tuft of hairs on the breast. Tail rather long and rounded.

Color. Above varying from deep black to yellowish brown, with a metallic lustre; the lower part of the back and tail-coverts deep chesnut, banded with greenish and black. Belly and thighs brownish grey. Legs reddish or flesh-colored. *Female*, smaller, and the plumage more dull; the tuft on the breast only apparent in old birds. *Young*, brownish yellow above, varied with dusky; clay-colored beneath.

Length, 42·0 – 50·0. Alar spread, 60·0 – 70·0.

The *Wild Turkey* is a species peculiar to North America. It was sent to Europe about twenty years after the discovery of this country. Here the domesticated and the wild are frequently mingled together, and produce a highly prized variety, scarcely inferior to the Wild Turkey in the metallic brilliancy of its tints. In its wild state, the Turkey feeds on beech-nuts, acorns, berries and grass, and likewise on beetles and tadpoles. It lays from ten to twelve eggs. The Wild Turkey may be said to be a resident from Mexico to Canada, making irregular migrations from one place to another in search of food. It has, however, almost entirely disappeared from the Atlantic States. A few are yet found about Mount Holyoke in Massachusetts, and in Sussex county in New-Jersey. I have not met with them in this State, where they were once exceedingly numerous, but as I am well informed, are now only found in the counties of Sullivan, Rockland, Orange, Allegany and Cattaraugus. Van der Donck,* who describes this State as it appeared at its first settlement by Europeans, states, that "the most important fowl of the country is the Wild Turkey. They resemble the tame Turkey of the Netherlands. These birds are common in the woods all over the country, and are found in large flocks, from twenty to forty in a flock. They are large, heavy, fat and fine, weighing from twenty to thirty pounds each, and I have heard of one that weighed thirty-two pounds. They are best in the fall of the year, when the Indians will sell a turkey for ten stivers, and with the Christians the price is a daelder each. They are caught with dogs in the snow, but the greatest number are shot at night from the trees. The Indians take many in snares when the weather changes in winter. Then they lay bulbous roots, which the turkies are fond of, in the small rills and streams of water, which the birds take up; when they are ensnared and held, until the artful Indian takes the turkey as his prize."

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* Description of the New Netherlands. Amsterdam, 1656. (*N. Y. Hist. Soc. Collections*, Vol. 1, new series.)

* INTRODUCED AND DOMESTICATED.

Genus PAVO, *Linnæus.* Bill naked at the base, thick, convex above, deflected at the tip. Cheeks partially naked. Head ornamented with a crest. Tarsi of the male spurred. Tail of eighteen feathers. Upper tail-coverts longer than the tail, broad, expansile, ocellated.

P. cristatus. The *Common Peacock.* Crest on the head compressed, of twenty-four feathers. General color above brillant blue, glossed with green and gold. Length, three to four feet.

The Peacock is a native of India, where it is still found in its wild state. It breeds readily throughout this country.

Genus NUMIDA, *Linnæus.* Bill thick, covered at the base with a warty membrane, in which the nostrils are placed. Head naked; the crown with a bony protuberance. Beneath the cheeks, pendulous carunculated wattles. Tarsi without spurs. Anterior toes united by a membrane as far as the first joint. Tail short, bent down, of fourteen or sixteen feathers.

N. meleagris. The *Guinea-fowl.* Head and upper part of the neck naked, with a bluish skin. Plumage bluish grey, sprinkled with rounded white spots. Length, 20 inches.

The Guinea-hen is originally from Africa, and has long been introduced into Europe and America. It is prolific and noisy, easily reared with us, and much esteemed as an article of food.

Genus GALLUS, *Brisson.* Bill smooth at the base, thick, slightly curved. Nostrils covered by an arched scale. Generally an erect fleshy crest on the head. Throat with fleshy wattles on each side of the lower mandible. Ears naked. Tarsi with strong spurs. Anterior toes united by a membrane as far as the first joint. Tail of fourteen feathers, compressed, arched, ascending.

G. domesticus. The *Common Cock.* Caruncle on the head usually compressed, denticulated. Throat with two pendulous wattles. Feathers of the neck linear and elongated.

Known in a state of domestication from the earliest times. The original stock very uncertain, but supposed to have been derived from a species (*G. bankiva*) still existing in a wild state in the island of Java. Numerous distinct varieties produced by domestication. No unreclaimed species of the genus known on the continent of America.

FAMILY TETRAONIDÆ.

Hind toe short and weak; sometimes altogether wanting. Tarsi occasionally with tubercles representing spurs. Tail short, rounded, of more than twelve feathers.

GENUS ORTYX. Stephens.

Bill short, thick, higher than wide: upper mandible curved from the base. No naked skin round the eye. Tarsi without spur or tubercle. Tail short and rounded, of twelve or more feathers, longer than the coverts. Some species with crests.

THE AMERICAN QUAIL.

Ortyx virginiana.

PLATE LXXV. FIG. 168 (Male). FIG. 169 (Female).

(STATE COLLECTION.)

Tetrao virginianus. Linnæus, Syst. Nat. p. 277 (female); *marilandicus*, Id. (male).
Maryland Partridge. Pennant, Arct. Zool. Vol. 2, p. 318.
Perdix virginianus. Wilson, Am. Orn. Vol. 6, p. 21, pl. 47, fig. 2 (male).
P. borealis. Vieillot, Nouv. Dict. *Ortyx id.* Stephens.
P. (Ortyx) virginiana. Bonaparte, Ann. Lyc. Vol. 2, p. 124.
Ortyx virginiana. Audubon, B. of A. Vol. 5. p. 59, pl. 289 (male female and young).
O. id., Common American Partridge. Giraud, Birds of Long island, p. 187.

Characteristics. Without distinct crest. Reddish brown, varied with black and white. Throat white, bordered with black. *Female* and *young:* Throat and stripe over the eye buff. Length, 9·5 – 10·0.

Description. Bill short and robust. Nostrils concealed under the feathers. Body short and bulky. Feathers of the head somewhat erectile, but not forming a distinct crest.

Color. Upper part of the body and head reddish brown; sides striped longitudinally with reddish and greyish, or reddish brown and light ash-color; beneath white streaked with reddish, and transversely barred with the same. Eye-stripe, light clay-color or white, often descending down the sides of the neck, bordered above and below with black. Throat white margined with black. Lower tail-coverts reddish brown, spotted with white, and marked

with black sagittate spots. Quills dusky, margined externally with blue: secondaries barred with light red. Tail bluish grey, sprinkled with yellowish and black. *Female:* Eye-stripe not distinct; throat and sides of the head clay-yellow, not bordered with black; lower side of the neck white, spotted with black.

Length, 9·5 – 10·0.

The *Common American Quail*, or *Partridge*, as it is indifferently called in various sections of the country, occurs in every part of the State, where it breeds, and is a constant resident. Their flight is rapid, but short, and they usually occur in large bevies. The nest is on the ground, and contains from eight to eighteen pure white eggs, and they raise a single brood in a season. Their food consists of grains, seeds and berries. Various attempts have been made to domesticate them, but hitherto with but limited success, owing to their restless and timorous habits. In the spring, the male has a loud whistle of two or three notes, which is thought by the country people to resemble the words *Buck Wheat*, and *Bob White*. It is eagerly sought after as a game bird, and is caught in great numbers by traps, horsehair nooses, nets and other devices. When flushed, they frequently take to trees; but they commonly roost on the ground, in a circle with their heads outwards.

The Common Quail ranges from Honduras to Massachusetts.

(*EXTRA-LIMITAL.*)

O. californica. (Lath. Ind. Orn. Supp. p. 62. Aud. Vol. 5, pl. 290.) Head with a tuft of six elongated feathers. Back and wings greyish brown. Beneath, throat black, margined by a white band descending from the eyes. Breast bluish grey; beneath reddish. *Female:* Crest smaller; throat and cheeks brownish white. Length, 9 inches. *California.*

O. plumifera, Gould. (Aud. B. of Am. Vol. 5, p. 69, pl. 291.) Crest of two long black linear-lanceolate feathers. Head, neck and breast greyish blue. Throat bright chesnut, margined by a black line on the sides. Beneath and flanks reddish, varied with white and black. Bill black: feet yellow. Length, 10·0 – 11·0. *Columbia river.*

O. neoxenus, Vigors. (Aud. Ib. p. 71, pl. 292.) Crest short, straight, and of about six lengthened black feathers. Back and tail greyish brown, with transverse dusky bars. Beneath dark brown, with numerous rounded white spots. Sides of the head and neck reddish. Length, 7·5. *California.*

GENUS TETRAO. Linnæus.

Bill short, robust, feathered at the base, and covering the nostrils. Wings short and round. A bare colored space on each side of the neck, usually concealed by the feathers. A bare red membrane over the eyes, more especially in the males. Head occasionally with a slight crest. Legs partially or wholly feathered.

THE COMMON PARTRIDGE, OR RUFFED GROUSE.

Tetrao umbellus.

PLATE LXXVII. FIG. 174.

Tetrao umbellus. Linnæus, Syst. Wilson, Am. Ornithology, Vol. 6, p. 45, pl. 49 (male).
T. (Bonasia) id. Bonaparte, Ann. Lyc. Nat. History, Vol. 2, p. 126.
Ruffed Grouse. Nuttall, Manual of U. S. Ornith. Vol. 1, p. 657.
Id., Partridge Pheasant. Audubon, Orn. Biog Vol. 1, p. 211, and Vol. 5, p. 560.
Ruffed Grouse. Rich. & Swainson, Fauna Bor. Am. Vol. 2, p. 312. Audubon, Birds of America, Vol. 5, p. 73, pl. 293. Giraud, Birds of Long island, p. 191.

Characteristics. With a slight crest, most evident in the males. Mottled with reddish and dusky brown. Lower portion of the tarsus and toes naked. Tail elongated, rounded, with a black subterminal band. Sides of the neck with a ruff of blackish feathers. Length, 18·0.

Description. Body bulky. Tarsi naked at the lower portion, and without spurs. Tail long, broad and rounded. Toes pectinated on the sides. The crest formed of two tufts of broad feathers. On each side of the neck, a tuft of black feathers concealing a large naked space.

Color. Head and neck varied with yellowish red and dull white. Back chesnut; the feathers with a white spot margined with black, and this again with reddish: all sprinkled with black. Eye-stripe yellowish white. Throat and upper part of the breast yellowish grey. Beneath yellowish white, alternately barred with black and greyish. Quills brown; their outer webs pale reddish, spotted with brown. Tail bright reddish brown, with numerous undulating bars of black and reddish: a subterminal broad black band, margined with greyish; tip bluish white, sprinkled with black. The thighs and part of the legs covered with a brownish white hairy down. *Female*, with the ruff and crest, but less developed than in the male, and the colors are less bright.

The *Pheasant*, or *Partridge*, by which latter name it is generally known in this State, is a constant resident with us. It breeds in every part of the State. It makes an exceedingly inartificial nest of dried leaves, usually by the side of a decayed log or the root of a tree, in

which it lays from six to twelve eggs of a dull brownish color. Its flight is rapid, but short, and, when suddenly aroused, with a loud whirring noise, such as we have observed in the Quail. It feeds on seeds and berries of various kinds, grapes, and other fruits. Their meat is occasionally poisonous, which has been attributed to their feeding on the leaves of the *Kalmia*. In the winter, they feed on the buds of various trees.

The American Partridge has a wide geographical range. It ranges along the coast from Mexico to the 56th parallel of latitude, and extends across the continent to the Pacific ocean.

THE GROUSE, OR PINNATED GROUSE.

TETRAO CUPIDO.

PLATE LXXVII. FIG. 175.

(STATE COLLECTION.)

Tetrao cupido. LINNÆUS, Syst. Nat. Vol. 1, p 274. WILSON, Am. Ornith. Vol. 3, p. 104, pl. 27, fig. 1 (male). BONAPARTE, Ann. Lyc. Nat History, Vol. 2, p. 127.
T. id., Pinnated Grouse. NUTTALL, Manual Ornith. of U. S. Vol. 1, p. 662.
T. id. AUDUBON, Birds of Am. Vol. 5, p 93, pl. 296 (male and female). GIRAUD, Birds of Long island, p. 127.

CHARACTERISTICS. Suberested, varied with bars of black and brown. Tail not banded. Feet feathered to the toes. Sides of the neck with a tuft of elongated feathers; the skin beneath naked. *Female*, without this tuft. Length, 18·0.

DESCRIPTION. Body robust. Head with its feathers somewhat elongated, and forming at pleasure a slight erectile crest. A warty bare space over the eyes. Tail short and rounded. Fourth quill longest.

COLOR. Above blackish brown, with numerous undulating bands of light reddish. Wing-coverts and secondaries lighter brown, and barred with reddish. Quills brownish, with the shafts black. Head with the bare space over the eyes bright scarlet, and the bare space on the sides of the neck orange. Throat and sides of the head cream-color. A dark longitudinal stripe under the eye. The long cervical feathers varied with reddish and white above; beneath dark brown or black. Tail dark greyish brown, marked transversely with pale reddish brown, slightly tipped with greyish. *Female*, smaller, and without the crest, cervical feathers, and naked space beneath.

Length, 16·0 – 18·0.

This species is known under the various names of *Grouse*, *Pinnated Grouse*, *Heath-hen** and *Prairie-hen*, in different sections of the country. In this State, they are now almost

* Various legislative enactments have been made for its preservation, but without success. One of the acts of the Colonial Legislature is said to have had this ludicrous title: "An Act for the preservation of the Heathen (Heath-hen) in this Colony."

entirely extirpated. The specimen figured in the plate, was one which I had obtained from Long island in 1840, and which was probably the last of his race in that district. It is still found in a few districts of the Atlantic States, in a few of the islands on the coast of Massachusetts, and the mountainous regions of Pennsylvania. They are also said to have been seen recently at Schooley's mountain in New-Jersey, and a few are still said to linger about Orange county in this State. They are so readily killed, that they soon disappear as the country becomes settled. The female builds her nest on the ground, depositing from eight to twelve eggs of a dull brown color, upon which she sets eighteen or nineteen days. The Grouse is easily tamed, and, with a little care, might soon be domesticated. It feeds on buds and berries. Its geographical range is from Texas to Maine, and it is common through the regions west of the Mississippi.

THE SPRUCE GROUSE.

TETRAO CANADENSIS.

PLATE LXXVI. FIG. 173.

(STATE COLLECTION.)

Tetrao canadensis. LINNÆUS, Syst. Nat. Vol. 1, p. 274. PENNANT, Arct. Zool. 182 sp. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 127. ID. Am. Orn. Vol. 3, pl. 20.
T. id. et *franklini.* RICHARDSON, F. B. A. Vol. 2, pp. 346, 348.
T. id., Spotted Grouse. NUTTALL, Man. Orn. Vol. 1, p. 667.
T. id., Spotted or *Canada Grouse.* AUDUBON, B. of A. Vol. 5, p. 83, pl. 294.

CHARACTERISTICS. Suberested. Darkish, spotted with white. Tail slightly rounded, with the tips brownish red, or a broad terminal band. Throat and breast deep black. *Female*, duller; the throat and breast rufous, barred with black. Length, 15·0.

DESCRIPTION. Feet short, and feathered to the toes, which are pectinate: middle toe longest. Third quill longest; the first very short. The crest formed by a number of rather elongated feathers.

COLOR. Above brownish black, barred with blackish; the membrane above the eyes scarlet. Quills and larger coverts blackish brown. Tail-coverts blackish, sprinkled with black and spotted with white; feathers of the tail dusky, and with a reddish terminal band. Throat and breast black, irregularly spotted with white. Belly and sides blackish, mottled with rufous and whitish. *Female*, smaller, with the colors not so bright; the scarlet membrane over the eyes smaller; the head, neck and breast reddish, broadly barred with black. There is much variety in the markings, scarcely any two resembling each other.

Length, 15·0 – 15·5.

The *Spruce* or *Spotted Grouse*, or *Canada Grouse*, or *Spruce Partridge* as it is called in this State, is yet common in the northern counties. In June, I saw them in Hamilton county, among the sources of the Raquet. They appear to be particularly attached to the forests of spruce and larch, feeding on the buds and cones with great avidity. Although by appearance and habits associated with game birds, the flesh is bitter, and has a peculiar taste as if boiled in turpentine. It lays from twelve to fourteen fawn-colored eggs, with irregular blotches of brown. In the United States, it ranges through Maine, New-Hampshire, Vermont, the northern part of this State, and on the Rocky mountains. Its northwardly range extends to the 67th parallel of latitude.

(*EXTRA-LIMITAL.*)

T. obscurus, Say. (Aud. B. of A. Vol. 5, p. 89, pl. 295.) Slightly crested. Black; a scarlet space over the eyes: throat greyish. Tail black, with a broad terminal greyish band. *Female:* greyish brown, barred with yellowish brown; throat greyish, undulated with brown. Length, 19·0 – 22·0. *Rocky mountains, Columbia river.*

T. phasianellus, Gm., Bonap. (Aud. Vol. 5, p. 111, pl. 298.) Reddish brown, barred with black above; beneath lighter, with arrow-shaped marks. Tail much graduated. Tarsi feathered. Length, 17·0. *Missouri, Rocky mountains.*

T. urophasianus, Bonap. (Aud. Vol. 5, p. 106, pl. 297.) Reddish brown above, varied and barred with black: narrow white band across the neck, and sides of the neck white. Tail of 20 narrow and acutely pointed feathers. Tarsi feathered. Length, 22·0 – 32·0. *La Platte, California.*

Genus Lagopus, *Vieillot.* Tarsus and toes feathered. Tail nearly even or slightly rounded, of more than twelve feathers, usually eighteen.

L. albus, *Ptarmigan.* (Aud. B. of Am. Vol. 5, p. 114, pl. 299.) White. *Summer*, rufous, with numerous zigzag black bars beneath; wings and feet pure white. Tail brownish black, tipped with white. Length, 16·0 – 17·0. *Maine, Rocky mountains.*

L. mutus et *americanus.* (Aud. Ib. pl. 300) White, spotted sparingly on the head and sides of the neck with reddish. Tail and shafts of the quills black. Length, 14·0. *Europe* and *Boreal America.*

L. rupestris, Swains. (Aud. Ib. p. 122, pl. 301.) In *winter*, white. *Summer*, reddish chesnut barred with black; beneath lighter, but barred with brownish black and reddish. Length, 13·5. *Rocky mountains, Labrador northwardly, Northern Europe.*

L. leucurus, Swains. (Aud. Ib. 126, pl. 302.) *Winter*, white. *Summer*, dark brown barred with chesnut, and undulated with fine black lines. Wings legs and tail white. Toes partially naked. Length, 12·0. *Rocky mountains.*

ORDER IV. GRALLÆ.

Bill various, but mostly straight and elongated, cylindrical or compressed, rarely flattened. Neck usually long. Legs and feet long and slender; the former more or less naked above the knees. Toes usually three before and one behind; the posterior toe on a level with or more elevated than the rest. Tail short, of from ten to twenty feathers.

FAMILY CHARADRIDÆ.

Bill short or moderate, compressed. Neck moderate. Eyes large. Feet rather short: nails small. Toes three or four; when the hind toe is present, it is very short, and articulated above the others. Wings moderate or long. Tail moderate.

GENUS CHARADRIUS. Linnæus.

Bill shorter than the head, rather slender, straight, cylindrical, depressed at the base, somewhat turgid at the tip. Head and eyes large. Feet three-toed, connected at the base by a membrane: naked part of the tarsus moderate. Wings long. Tail more or less rounded, of twelve feathers.

AMERICAN RING PLOVER.

Charadrius semipalmatus.

PLATE LXXIX. FIG. 179.

(STATE COLLECTION.)

Tringa hiaticula. Wilson, Am. Orn. Vol. 7, p. 65, pl. 59, fig. 3 (adult in spring).
C. semipalmatus. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 296. Id. Am. Orn. Vol. 4, p. 92, pl. 25, fig. 4 (young).
C. id., Semipalmated Ring Plover. Nuttall, Man. Orn. Vol. 2, p. 24.
C. id. Richardson, F. B A. Vol. 2, p. 367. Audubon, B. of A. Vol. 5, p. 218, pl. 320.
Egialites id. Bonaparte, Geog. and Comp. List, p. 45.
C. id. Giraud, Birds of Long island, p. 215.

Characteristics. Toes connected at the base by a membrane. Brownish ash above. Front, collar, and beneath white: frontlet and ring over the breast black. Bill and feet orange; the former black at tip. Sincipital band and auriculars black. Length, 7·5.

Description. Bill moderate, depressed near the base; nasal groove nearly half the length of the bill. Tarsus with hexagonal scales. Middle toe longest; the web includes two joints of the outer and one of the inner toe: the first quill longest.

Color. A narrow white stripe in front of the head above the frontlet, and broadly margined above with black. Color of the frontlet continued beneath the eyes, and on the ear-feathers. The black collar over the base of the neck dilates on the sides, and becomes contracted behind. Upper part of the head and back dull olive; beneath white. Quills dark brown; the shafts white above for about a third of their length: secondary coverts broadly tipped with white. Tail brown, darker towards the end, and tipped with white; the outer feathers white nearly through their entire length. Legs dusky orange or flesh-color. *Female:* band on the head, and ring on the neck, brown. *Young:* wing-coverts and scapulars edged with dusky white.

Length, 7·0–8·0. Alar extent, 14·0.

The *Ring Plover*, or *Ring-neck* as it is commonly called in this State, arrives here about the beginning of May, and, after a sojourn of a few weeks, continues on its way to the north to breed. It breeds in Labrador, and is found as far as 70° north latitude. It lays four dull yellowish eggs with irregular spots and blotches of brown. It feeds on seeds, but chiefly on the smaller aquatic animals, and in the autumn is considered a delicate article of food. They usually reappear along our coast in August; and in October and November, they return to the south as far as the 24th parallel. It is a constant resident from Carolina southwardly during the winter. It has for a long time been confounded with the *C. hiaticula* of Europe, with which it is nearly allied.

THE PIPING PLOVER.

CHARADRIUS MELODUS.

PLATE LXXVIII. FIG. 177 (YOUNG).

(STATE COLLECTION.)

Charadrius hiaticula. WILSON, Am. Orn. Vol. 5, p. 30, pl. 37, fig. 3 (adult in spring).
C. melodus. ORD, Supplement to Wilson's Orn. p. 212. BONAPARTE, Ann. Lyc. Nat. History, Vol. 2, p. 296. ID. American Ornithology, Vol. 4, p. 74, pl. 24, fig. 3 (summer dress).
C. id., Piping Ringed Plover. NUTTALL, Manual Ornith. Vol. 2, p. 18.
C. id. AUDUBON, Birds of Am. Vol. 5, p. 223, pl. 321 (male and female). GIRAUD, Birds of Long island, p. 217.

CHARACTERISTICS. Light ash above, obscurely barred with brown. Frontlet and beneath white. A black band on the front: a narrow black ring on the neck, not continued in front. Inner toe cleft to the base. Bill yellow. *Young*, no black marks on the head or breast; bill black. Length, 7·0.

DESCRIPTION. Bill straight, short, subcylindrical. Inner toe shorter than the outer, and cleft to the base; a short membrane between the outer and the middle toe.

COLOR. Bill orange towards the base, black at tip. Feet dusky yellow. Above light ash brown. A black band on the forehead, above the white frontlet. A black ring across the back of the neck, scarcely continued in front; above this ring, on the back of the neck, is a white ring. Frontlet, neck and all beneath white. *Female*, with the black markings of a dusky brown: no white on the back of the neck. *Young* (shot August 10): Frontlet, line over the eye, neck and all beneath white; tertials obscurely barred with dusky; axillary feathers white tinged with brown. Quills blackish tipped with white, and spotted with white on their inner webs and shafts, becoming larger towards the smaller ones. Tail blackish, tipped with white; the two external feathers nearly all white.

Length, 6·5 – 7·5.

This species is common along the shores of this State, where it breeds. It makes a slight excavation in the sand for its nest, depositing four cream-colored eggs, sprinkled with brownish dots. Its food similar to that of the preceding.

The *Piping Plover* or *Beach-flea*, or *Beach-bird* as it is sometimes called on Long island, ranges from 24° to 53° north, breeding from New-Jersey to Nova-Scotia. It appears with us about the last of April, and leaves during the month of October. It is a resident during winter from South-Carolina southwardly.

WILSON'S PLOVER.

CHARADRIUS WILSONIUS.

PLATE LXXVIII. FIG. 176 (MALE).

(STATE COLLECTION.)

Charadrius wilsonius. ORD, Supplement to Wilson's Ornith. Vol. 9, p. 242, pl. 73, fig. 5. BONAPARTE, Ann. Lyc. Nat. Hist. Vol. 2, p. 296.
C. id., Wilson's Plover. NUTTALL, Manual Ornith. Vol. 2, p. 21.
C. id. AUDUBON, Birds of America, Vol. 5, p. 214, pl. 319 (m. & f.).
Ægialites id. BONAPARTE, Geog. and Comp. List, p. 45.
C. id., Wilson's Plover. GIRAUD, Birds of Long island, p. 216.

CHARACTERISTICS. Front, neck and all beneath white: frontlet, and a broad belt round the breast black. Bill large and black. *Female:* Belt round the neck, dusky brown. Length, 7·5.

DESCRIPTION. Bill as long as the head, stout, straight, somewhat swollen at the end, nearly an inch long; the posterior part of the turgid portion of the upper mandible compressed into a carina. The two outer toes connected by a membrane. Tail broad, slightly rounded, of twelve feathers, and extending beyond the tips of the closed wings.

COLOR. Above ash-colored. Forehead white; lores and anterior part of the crown black or dusky brown. A broad black collar on the front of the breast, passing into light ferruginous on the back part of the neck. Ear-feathers light brownish drab. Tail greyish; the two outer feathers nearly all white.

Length, 7·0 – 8·0.

This southern species is rare on our coast, which appears to form the limit of its northern migration. It has often been confounded with the preceding, from which it may readily be distinguished by its long black bill. Its eggs cream-color, with dots and spots of light brown. It ranges from the 24th to the 42d degree of north latitude. According to Mr. Linsley, it occurs on the coast of Connecticut. It breeds from Texas to New-York, and is a winter resident in the Southern States.

THE KILLDEER, OR KILLDEER PLOVER.

CHARADRIUS VOCIFERUS.

PLATE LXXIX. FIG. 181 (FEMALE.)

(STATE COLLECTION.)

Charadrius vociferus. LINNÆUS, Syst. Nat. 12 ed. p. 253.
Noisy Plover. PENNANT, Arct. Zool. Vol. 2, p. 484.
C. id., Killdeer. WILSON, Am. Orn. Vol. 7, p. 73, pl. 59, fig. 6. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 297.
C. id., Killdeer Plover. NUTTALL, Man. Orn. Vol. 2, p. 22.
C. id. RICHARDSON, F. B. A. Vol. 2. p. 368.
Egialites id. BONAPARTE, Geog. and Comp. List, p. 45.
C. id. AUDUBON, B. of A. Vol. 5, p. 207, pl. 317 (male and female). GIRAUD, Birds of Long island, p. 218.

CHARACTERISTICS. Brownish olive. Rump orange. Front, collar and all beneath white: a broad ring on the neck, and a belt on the breast, black. Tail pointed.

DESCRIPTION. Bill shorter than the head, straight, turgid towards the tip; lower mandible shortest. Tertials and fourth quill subequal. Legs bare for some distance above the joint: outer toe connected with the inner by a web. Tail graduated; its feathers lacerated at the tips.

COLOR. Head, back, wing-coverts and secondaries brownish olive. Quills brownish black. Frontlet brownish, and passing back under the eye: front white; eyelids scarlet. Rump and tail-coverts tawny orange. Two broad bands across the lower part of the neck and the breast, separated by a white interval. Tail-feathers tawny orange at the base, with the exception of the middle feathers: all with a black subterminal band; the tips white; the outer feather on each side white, with black spots on the inner web. *Female* (shot May 8): Frontlet white, margined above with black, and extending obscurely above and behind the eyes. Quills, except the first, spotted with white on their outer webs towards the tip; greater coverts tipped with white; the tips of the tail-feathers emarginated in a singular manner. Rump and upper tail-coverts bright orange.

Length, 10·0 – 11·5. Alar extent, 20·0 – 21·0.

The *Killdeer Plover,* which derives its name from a fancied resemblance of its two notes to the word *killdeer*, breeds from Texas to Massachusetts, and ranges to the Rocky mountains. It occurs between the 20th and 56th parallels of latitude. During summer, it keeps in the interior; but in winter, approaches the seashore. It feeds on worms, nocturnal insects and grasshoppers, and its flesh is in little esteem. Its eggs are three or four, cream-colored, blotched with black. A resident in this State during the year.

THE GOLDEN PLOVER.

Charadrius virginiacus.

PLATE LXXVIII. FIG. 178.

(STATE COLLECTION.)

Golden Plover. Pennant, Arct. Zool. Vol. 2, p. 483. No. 398 and 399.
C. pluvialis. Wilson, Am. Orn. Vol. 7, p. 71, pl. 59, fig. 5. Bonaparte, Ann. Lyc. N. Y. Vol 2, p. 297.
C. virginiacus, Borkheim. Bonaparte, Geog. and Comp. List, p. 45.
C. marmoratus. Wagler, Syst. Avium. Audubon, B. of A. Vol. 5, p. 203, pl. 216.
C. pluvialis. Nuttall, Man. Orn. Vol. 2, p. 16. Richardson, F. B. A. Vol. 2, p. 368.
C. marmoratus. Giraud, Birds of Long island, p. 213.

Characteristics. Mottled above with black and greenish yellow; the long axillary feathers light brown. *Summer,* with large patches of black beneath. *Winter,* whitish beneath. *Young,* duller; beneath varied with black and whitish. Length, 10·5.

Description. Bill shorter than the head, straight, slightly curving at the tip. Tibia bare for some distance above the joint. Outer toe connected with the middle by a web to the second joint. First quill longest: tips of the wings extending beyond the tail, which is nearly even, rounded. Legs extending beyond the tips of the wings.

Color. This is subject to great variations, according to the season and the moult; but in all a constant character may be found in the mottled greenish yellow, rufous and black upper parts, from which results a general greenish appearance. Quills and coverts greyish brown; lower parts mottled with white and black. In the specimen figured, and which was shot in May, the throat and breast ash-grey, streaked with brown; breast barred with brown, and the tail with a subterminal band of yellowish or dingy white: the streak over the eye almost obsolete.

Length, 10·5–11·0.

This bird has for a long time been confounded with the *pluvialis* of Europe, with which it is closely allied, but is smaller, and has the long axillary feathers dull brown instead of pure white. It ranges from 23° to 75° north, and breeds in the Arctic regions and islands of the Arctic sea. It appears in this State, in a straggling manner, in the latter part of April; and after a stay of a few weeks, passes on to the north to breed. Eggs are said to be pale olive, marked with blackish spots. After breeding, they return rapidly through this State in the early part of September, and are then to be seen in large flocks on the open plains of Long island, in search of grasshoppers and other insect food. As they appear in the greatest numbers after a sharp frost, they are popularly known under the name of *Frost-bird.* They are frequently also called *Greenbacks.* At that period it is a watchful and timid bird, and hence is usually shot from wagons by sportsmen. In the course of a week or two, they disappear, and pass the winter south of the United States.

(*EXTRA-LIMITAL.*)

C. montanus. (Towns. Tr. Ac. Sc. Vol. 7, p. 192. Aud. Vol. 5, pl. 318.) *Female*, dull yellowish above; forehead, band over the eye, fore part of the neck and all beneath white; bill black; top of the head and nape dark yellowish brown. Tail even, yellowish brown tipped with yellowish white. *Male*, unknown. Length, 8·5. *Rocky mountains.*

GENUS SQUATAROLA. Cuvier.

Habits and general appearance of the preceding. Feet four-toed; hind toe very small.

THE WHISTLING PLOVER.

Squatarola helvetica.

PLATE LXXIX. FIG. 180 (Spring plumage).

(STATE COLLECTION.)

Tringa helvetica. Linnæus, Syst. Nat., p. 250.
Charadrius apricarius. Wilson, Am. Orn. Vol. 7, p. 73, pl. 59, fig. 4.
Vanellus helveticus. Ord's reprint of Wilson, Vol. 9, p. 42. *Squatarola*, Cuvier.
C. (Squatarola) id. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 293.
Vanellus melanogaster. Temminck, Vol. 2, p. 547. Richardson, F. B. A. Vol. 2, p. 370. Nuttall, Man. Orn. Vol. 2, p. 26.
Charadrius helveticus. Audubon, Birds of Am. Vol. 5, p. 199, pl. 315. Giraud, Birds of Long island, p. 211.

Characteristics. Mottled. Bill long. *Summer*, mottled with black and white; beneath black. *Winter*, mottled with black and yellow; beneath whitish. *Young* and *moulting*, varied with black and whitish, often dull white spotted with brown. Length, 11·5.

Description. Bill longer than the head, straight, stout, 1·5 long. Wings scarcely extending beyond the tail, which is slightly rounded. A rudimentary web between the toes. Hind toe with a minute nail.

Color, varies much with the season. *In summer*, forehead dull white; head greyish white; bill, throat, breast, and axillary feathers black. The specimen represented in the plate was shot early in the spring, and scarcely requires further detail. A specimen labelled "*young*," in the State Collection, is marked as follows: The color and arrangement of the markings resemble those of the *C. virginiacus*, although somewhat lighter. Inner triangular spots on the tertials rufous. Frontlet, chin and obsolete line over the eye dull grey. Head

and neck finely striate with black and greenish olive; sides of the head and neck brown and grey. Flanks obscurely barred with dusky: abdomen dusky. Vent and under tail-coverts white; tail slightly tipped with rufous. In all other respects agreeing with the adult in its spring dress.

Length, 10·5 – 12·0. Alar extent, 23·0.

The large *Whistling Plover*, or *Bull* and *Beetle-head Plover* as it is called in its autumnal dress, appears with us from the south in May, ranging from 26° to 70° north. It breeds from Pennsylvania northwardly. It lays four cream-colored eggs, spotted and blotched with light brown. Feeds on insects and berries. It passes through Long island in September, on its way southwardly. It is common to Europe and America. Is closely allied to the *Lapwing* of Europe.

(*EXTRA-LIMITAL.*)

S. townsendi, Aphriza? id. (Aud. B. of A. Vol. 5, p. 228, pl. 322.) Dark blackish grey. Rump, upper tail-coverts, and band across the wings white; beneath dull greyish white: the breast somewhat darker. *Male*, unknown. Length, 11 inches. An *Strepsilas? Columbia river.*

GENUS STREPSILAS. Illiger.

Bill shorter than the head, straight, in the form of an attenuated cone, flattish above, truncated at the end. Nostrils basal, linear-oblong, half closed by a membrane. Feet moderate, four-toed: a very small part of the tibia bare. Tarsus not longer than the middle toe, rather robust. Toes divided to their origin; hind toe touching the ground. Wings long and pointed; first quill longest. Tail moderate.

THE TURNSTONE.

STREPSILAS INTERPRES.

PLATE LXXX. FIG. 182.

(STATE COLLECTION.)

Tringa interpres, LIN. p. 248. *Hebridal Sandpiper*. PENNANT, Arct. Zoology, Vol. 2, p. 472.
Strepsilas id. ILLIGER, Prodromus Syst.
S. collaris. TEMMINCK, Man. Vol. 2, p. 553.
Tringa interpres. WILSON, American Ornithology, Vol. 7, p. 32, pl. 57, fig. 1 (adult).
Strepsilas id. BONAPARTE, Ann. Lyc. Nat. Hist. Vol. 2, p. 229.
Sea Dotterel. NUTTALL, Man. Orn. Vol. 2, p. 30.
Turnstone. RICHARDSON, F. B. A. Vol. 2, p. 371. AUDUBON, Birds of Am. Vol. 5, p. 231, pl. 323. GIRAUD, Birds of Long island, p. 220.

CHARACTERISTICS. Upper parts varied with white, black and ferruginous. Throat, abdomen and rump white. Bill and breast black. *Young*, varied with grey and faint rufous; breast varied with grey and dusky. Length, 9·5.

DESCRIPTION. Bill compressed above near the base, turgid in the middle, blunt at the tips. Wings reaching to or beyond the tail, which is short and rounded: inner secondaries much elongated. Through inadvertence on the part of the engraver, the hind toe has been omitted.

COLOR. Bill black. Feet orange red. Crown white, streaked with black. A broad band of white crosses the forehead, passes over the eyes and down the sides of the neck; the black on the breast rises up on the sides of the neck, and nearly surrounds it. Back, wing-coverts and tertiaries chesnut-brown, blotched with black. Tail white, with a broad blackish brown bar towards the end, and tipped with white. *Young*, mottled above with brown and whitish, and slightly tinged with rufous on the wing-coverts. Chin yellowish; throat and upper part of the breast brown, obscurely barred with whitish: base of the bill light yellow. *Winter*, plumage as in the figure; edges of the scapulars, and of some of the wing-coverts white. Tail with a comparatively narrower band of black.

Length, 9·0 – 10·0.

This bird, which is generally distributed over Europe and America, arrives in this State from the south at the commencement of April, and proceeds northwardly the last of May. It is known among our *gunners* (a class of men who earn a livelihood by shooting birds) under the names of *Brant-bird*, *Heart-bird*, *Horsefoot Snipe*, and *Beach-bird*. The young are often designated as *Beach-birds*. They live on marine animals, turning over stones and seaweed during their search. It is very fond of the eggs of the *Limulus polyphemus*, or *Horsefoot*. Eggs pale greenish, with patches and streaks of red. It returns to our State in September, and remains until late in the autumn. It does not appear to go far inland, but is confined to the Atlantic coast. A few winter in the Southern States. It ranges from the tropics to the Arctic ocean, and breeds from Maine northwardly.

GENUS HÆMATOPUS. Linnæus.

Bill long, compressed, stout, cuneate; the tip much compressed. Nostrils basal, oblong-linear, pervious, placed in a short furrow. Feet three-toed; all directed forward; the outer and middle connected as far as the first joint: all the toes bordered with a narrow membrane.

THE AMERICAN OYSTER-CATCHER.

HÆMATOPUS PALLIATUS.

PLATE LXXX. FIG. 183.

(STATE COLLECTION.)

Pied Oyster-catcher. Pennant. Arct. Zool. Vol. 2, p 489.
H. ostralegus. Wilson, Am. Ornithology, Vol. 8, pl 64. fig. 2. Bonaparte, Ann. Lyc. Nat. Hist. N. Y. Vol. 2, p. 300. Nuttall, Man. Orn. Vol. 2, pp. 12 and 15.
H. palliatus. Temminck, Man Orn. Vol 2, p. 532.
H. id. Bonaparte, Oss. sulla seconda editione del Regno Animale, p. 91. Id. Geog. and Comp. List, p. 46.
H. id. Audubon, Birds of Am. Vol. 5, p. 236, pl. 324. Giraud, Birds of Long island, p. 222.

Characteristics. Head, neck and throat brownish black. Back, scapularies and wings ash-brown. The first three primaries of a uniform color. Length, 18·0.

Description. Bill stout, and particularly so at its deepest part. Naked portion of the tibia, and the tarsus with hexagonal scales. Wings long and pointed; the first quills longest. Tail short, somewhat rounded, of twelve rounded feathers.

Color. Bill red. Feet reddish. Head, neck and throat glossy black: lower eyelids white. Tips of the secondary coverts, outer secondaries, and breast and all beneath pure white. Irides yellow. Base of the tail-feathers white; beyond this, ashy brown.

Length, 17·0–19·0.

The *Oyster-catcher*, or as it is better known among our gunners by the name of *Flood Gull*, is not very common on the coast of this State. Its eggs are cream-colored, spotted with brownish black. It feeds on oysters and other marine bivalves. The flesh is tough and unsavory. It breeds from Texas to Labrador, and ranges from the tropics to the fifty-second parallel.

(*EXTRA-LIMITAL.*)

H. bachmani. (Aud. Birds of Am. Vol. 5, p. 243, pl. 325.) Bill and edges of the eyelids vermilion. General color uniform brownish black. Feet whitish. Length, 17·5. *Northwest Coast.*

H. townsendi. (Id. ib. Vol 5, p. 245, pl. 326.) Uniform brownish black. Wing-coverts narrowly edged with white. Feet red. Length, 20·0; of bill, 3·3. *Northwest Coast.*

FAMILY GRUIDÆ.

Bill strong, elongated. Neck and feet elongated. Four toes: tarsus longer than the middle toe; hind toe usually long, and resting on the ground.

GENUS GRUS. Brisson.

Bill somewhat longer than the head, straight, compressed, deeply channelled at the base of the upper mandible on each side. Nostrils medial, placed in the groove, and closed behind by a membrane. Head more or less bald, sometimes crested. Tibia considerably denuded.

THE AMERICAN CRANE.

Grus americana.

Ardea americana, Lin. p. 234 (adult). *A. canadensis*, Id. (young).
Hooping Crane, and *Brown Crane*. Pennant, Arct. Zool. Vol. 2, p. 442, and p. 443.
A. americana. Wilson, Am. Ornith. Vol 8, p. 20, pl. 64, fig. 3.
A. id. et *canadensis*. Bonaparte, Ann. Lyc. Vol. 2, p. 302. Richardson, F. B. A. Vol. 2, pp. 372 and 373.
A. id. Nuttall, Man. Orn. Vol. 3, pp. 28 and 34. Bonaparte, Comp. List, p. 46. Audubon, B. of Am. Vol. 5, p. 188, pl. 313 (adult); 314 (young).

Characteristics. White. Quills and their shafts black. Crown and cheeks bald. *Young*, bluish grey; quills and their shafts brownish white. Length, 54·0.

Description. Neck and feet very long; the bare portion of the tibia covered with transverse series of rectangular scales. Head and cheeks naked, flesh-colored, and covered with hairs. Second quill longest. Tail short and rounded. Color of the adult and young as in the specific phrase.

The *Large Brown* or *Whooping Crane* has not been observed by me in this State; but from its geographical range, it will doubtless be obtained here. It appears not to extend along the Atlantic coast farther than New-Jersey, although it extends its migrations northwardly in the interior to the 68th parallel. The eggs are said to be green, with numerous spots of brown confluent at the larger end. Wilson long ago supposed the *Brown* or *Canada Crane* to be the young of the great white *Whooping Crane*, but his views were disregarded by many subsequent naturalists. "It is highly probable," he says, "that the species described by naturalists as the *Brown Crane* (*Ardea canadensis*), is nothing more than the young of the *Whooping Crane*. In a flock of six or eight, three or four are usually of that tawny or reddish brown tint on the back, scapulars and wing-coverts, but are evidently yearlings of the Whooping Crane, and differ in nothing but in that and size from the others; they are generally five or six inches shorter, and the primaries are of a brownish cast." Dr. Bachman has since conclusively demonstrated the identity of the two nominal species.

GENUS ARDEA.

Bill much longer than the head, robust, straight. Beneath with slender elongated plumes. Head usually with a pendant crest. Hind toe resting its whole length on the ground.

THE GREAT BLUE HERON.

ARDEA HERODIAS.

PLATE LXXXI. FIG. 184.

Ardea herodias. LINNÆUS, Syst. Nat. 12 ed. p. 237.
Great Heron. PENNANT, Arct. Zool. Vol 2, p. 413.
A. id. WILSON, Am. Orn. Vol. 8, p. 28, pl. 65, fig. 2. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 304.
A. id. RICHARDSON, F. B. A. Vol. 2, p. 373. NUTTALL, Manual Orn. Vol. 2, p. 42.
A. id. AUDUBON, B. of A. Vol. 6, p. 122, pl. 369 (male). GIRAUD, Birds of Long island, p. 276.

CHARACTERISTICS. Crested. Bluish ash: thighs ferruginous; crest black, with two long feathers; back with long greyish plumes. *Young:* crown dark slate; no dorsal pendant feathers. Length, 50·0.

DESCRIPTION. Bill seven to eight inches long, very sharp at the points, and serrated slightly near the tips. Tarsi nearly as long as the bill. Space between the bill and the eye, and around the latter, bare.

COLOR. A white stripe from the base of the bill, passing over the crown. Sides of the crown and hind head bluish black, and crested. Two long tapering black feathers in the crest, six inches in length. Chin and cheeks white, but with double rows of black abbreviated stripes. Breast with numerous long ashen brown feathers. Thighs and edge of the wings rust-colored. Quills bluish black. Back, wing-coverts and tail bluish.

Length, 48·0 – 54·0.

The *Great Blue Heron* appears early in the spring, on our coast, from the South, and remains with us until the autumn. It feeds on crabs, shellfish, eels and various fish. It is partly nocturnal in its habits, and a portion of its breast is covered with a down, which is said to be phosphorescent. Its use is supposed to be to attract fishes by night. It lays two to three dull bluish white eggs unspotted. It ranges from 25° to 50° north, but is more usually restricted to 42°. It prefers the vicinity of the sea. It is a resident from South-Carolina southwardly. It is with us a common species, and breeds in this State.

THE GREAT WHITE HERON.

ARDEA LEUCE.

PLATE LXXXI. FIG. 186.

Great White Heron. PENNANT, Arct. Zool. Vol. 2, p. 445.
Ardea egretta. WILSON, Am. Orn. Vol. 7, p. 106, pl. 61, fig. 4.
A leuce, ILLIGER. *A alba,* BONAPARTE, Ann. Lyc. N. Y. Vol 2, p. 304.
A. egretta. BONAPARTE, Am. Orn. Vol. 4, p 97. NUTTALL, Man. Orn. Vol. 2, p. 47.
A. id. AUDUBON, B. of A. Vol. 6, p. 132, pl. 370. GIRAUD, Birds of Long island, p. 288.

CHARACTERISTICS. Snowy white. Bill yellow; legs black: no crest. Long pendant plumes on the back, extending over the tail. *Young*, without the pendant plumes. Length, 40·0.

DESCRIPTION. Characters sufficiently detailed in the specific phrase. The general snowy whiteness is frequently found to have a tinge of yellow. The highly prized dorsal train disappears after incubation, and, according to Mr. Audubon, reappears in all its graceful length in the spring.

Length, 40·0–48·0. Alar extent, 60·0.

This showy species inhabits from the equator to 43° north; this State being its northern boundary. It breeds in the adjoining State of New Jersey, and may probably do so in this State. They reach us about the middle of May, and leave for the south early in the autumn. Their food consists of frogs, salamanders, mice, moles, snakes, etc. Eggs two or three, pale blue. It has hitherto been confounded with the *A. alba* of Europe, to which it is closely allied.

THE WHITE-CRESTED HERON.

ARDEA CANDIDISSIMA.

PLATE LXXXII. FIG. 187.

(CABINET OF THE LYCEUM.)

Ardea candidissima, GMELIN. WILSON, Am. Orn. Vol. 7. p. 120. pl 62, fig. 4 (adult).
A. id. BONAPARTE, Annals Lyceum N. Y. Vol. 2, p. 365. NUTTALL, Manual Ornith. Vol. 2, p. 49.
A. id., *Snowy Heron.* AUDUBON, B. of A. Vol. 6, p. 163, pl. 374. GIRAUD, Birds of Long island, p. 283.

CHARACTERISTICS. Crested. Snowy white. Bill and legs black; toes yellow. *Young*, slightly crested, and without the dorsal train. Length, 24·0.

DESCRIPTION. Bill straight, tapering, 4·3 long. The feathers on the head form a loose crest, 4·0 long: a similar tuft on the breast. The adult has a dorsal train of long silky recurved plumes, scarcely reaching beyond the tail, which is very short and slightly rounded, of twelve feathers.

COLOR. The bare space on the side of the head, and edges of the eye-lids, yellow. General plumage of a snowy whiteness; but in the specimen examined, a slight tinge of yellowish at the origin of the dorsal train, and on the feathers of the thighs.

Length, 22·0 – 26·0. Alar extent, 36·0 – 38·0.

This southern species extends its migrations as far east as Massachusetts, and is certainly known to breed in New-Jersey, if not in this State. It is often seen on our coast, where it is familiarly known as the *White Poke*. It feeds on fish, crabs, salamanders, and the seeds of aquatic plants. Eggs pale bluish green. It appears on this coast in May, and leaves us in September. It is a constant resident from Florida southwardly, and its geographical range is comprised between the tropics and the 43d parallel of latitude.

THE BLUE HERON.

ARDEA CERULEA.

Ardea cerulea, LINNÆUS. *Blue Crane.* WILSON, Am. Orn. Vol. 7, p. 117, pl. 62, fig. 3 (adult).
A. id. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 306.
Egretta id. BONAPARTE, Geog. and Comp. List, p. 47.
A. cerulea. NUTTALL, Man. Orn. Vol. 2, p. 58. AUDUBON, B. of A. Vol. 6, p. 148, pl. 372.
A. id. GIRAUD, Birds of Long island, p. 282.

CHARACTERISTICS. Crested. Slate-blue. Head and neck brownish blue: feathers of the back and neck slender and elongated. *Young*, whitish varied with greyish blue. Length, 24·0.

DESCRIPTION. Bill robust, slightly decurved above, 4·0 long. Lower half of the tibia bare: claw of the hind toe largest. The feathers on the back long, and extending 4·0 beyond the tail. Feathers of the hind head long and slender, increasing in length behind. Tail short and even.

COLOR. Bill bluish at the base, becoming black towards the tip. Legs and toes black. General color of the plumage blue. Head and neck purplish blue; the anterior portion of the neck with a longitudinal bluish line.

Length, 20·0 – 25·0.

This is a southern species, inhabiting the Antilles, and extending to the equator. It is a rare visiter to our coast, but according to Mr. Linsley, has been observed in Connecticut. It frequents marshes, feeding on fishes. Eggs three or four, bluish green. It breeds from New-Jersey southwardly, and is a resident from Florida towards the tropics.

THE LOUISIANA HERON.

Ardea ludoviciana.

Ardea ludoviciana. Wilson, Am. Orn. Vol. 8. p. 13, pl. 64, fig. 1. *A. leucogaster,* Ord's reprint.
A. id. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 305; Obs. on Wilson's Orn.
A. id. Nuttall, Man. Orn. Vol. 2, p. 51. Audubon, B. of A. Vol. 6, p. 156, pl. 372.
A. id. Giraud, Birds of Long Island, p. 231.

Characteristics. Crested. Slate-blue: back, rump and beneath white: breast and back with long purplish feathers; throat white. *Young*, greyish mixed with bluish. Length, 27·0.

Description. Bill strait, compressed, tapering, 3·5 long. Nostrils basal, linear. Tibia bare for half its length. Tarsus compressed, as long or longer than the bill: hind toe shortest. Tail short, small, slightly rounded. Feathers of the head elongated, as are those of the back part of the neck, but not to so great a degree. A large mass of elongated feathers on the breast or lower part of the neck. Feathers of the fore part of the back thread-like, elongated, and extending far beyond the tail.

Color. Bill yellow at base, blackish at the tips: bare space before and around the eye yellow. Feet light yellowish green. General color above blue. Crest blue; the long feathers on the back of the head white. The dorsal feathers blue, but becoming dull yellowish white towards the tips. Throat white: a broad longitudinal band of bluish, dark reddish brown and white, occupies the whole fore part of the neck, and is lost in the white of all the under parts.

Length, 26·0 – 27·0.

This is so rare a species, that it may be considered as an accidental visiter. Mr. Giraud obtained one from Suffolk county, about six years since, and I have heard of none other having been obtained since that period. It is even rare in New-Jersey. It is a southern species, extending to the tropics. Breeds in Florida and Texas, where it is a constant resident.

THE GREEN HERON.

Ardea virescens.

PLATE LXXXII. FIG. 188.

Ardea virescens, Linnæus, p. 238. Wilson. Am. Orn. Vol. 8, p. 97, pl. 61, fig. 1.
Green Heron. Pennant, Arct. Zool. Vol 2, p. 417.
A. (Botaurus) id. Bonaparte, Ann. Lyc. N. Y. Vol 2, p. 307.
Green Heron. Nuttall, Man. Orn. Vol. 2, p. 63. Audubon, B. of A. Vol. 6, p. 105, pl. 367. Giraud, Birds of Long island, p. 281.

Characteristics. Crested. Crown and wing-coverts glossy green: neck and breast bright rufous; chin and throat whitish, striped or spotted with deep brown: tapering pointed feathers on the back. *Young*, less brilliant, and wanting the elongated dorsal feathers. Length, 17·5.

Description. Bill nearly straight, pointed, compressed and gently curved. Upper mandible slightly notched near the tip. Nostrils basal, linear. Tibia moderately denuded above the joint. The naked space from the bill to the eyes, passes behind the eyes. Feathers of the hind head erectile, long and loosely webbed; those of the back long and pointed. Scapulars very large: second quill longest.

Color. Bill black above; yellowish beneath: both mandibles tinged with yellow at the base. Legs and feet greenish yellow. The crest near the frontlet, greenish glossy black. Wing-coverts and tertials green, bordered with brownish or grey. Dorsal feathers hoary green, with white shafts. Quills blue-black, lighter on their outer webs. Flanks and abdomen chesnut or ashy brown. Hind part of the body deep green.

Length, 17·0 – 18·0. Alar extent, 25·0.

The *Poke*, *Chalk-line*, *Fly-up-the-creek*, or *Schyte Poke* as he was called by our Dutch progenitors, is a southern species, arriving in this State about the middle of April, and leaving us in October. It breeds in this State. Eggs bluish green. It prefers marshy situations, feeding on the smaller reptiles and fishes. It is common throughout the State, and, from some curious notions respecting its habits, is held in general contempt. Its geographical range extends from Mexico to the forty-fourth parallel. This species is arranged by Bonaparte under the genus Herodias of Boié.

THE SMALL BITTERN.

ARDEA EXILIS.

PLATE LXXXIII. FIG. 190.

(STATE COLLECTION.)

Ardea exilis, GMELIN. *Little Heron*, PENNANT, Arct. Zool. Vol. 2, p. 453 (exc. syn.) WILSON, Am. Orn. Vol. 8, p. 37, pl. 65, fig. 4.
A. (Ardeola) id. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 308.
Ardeola id. BONAPARTE, Geog. and Comp. List, p. 43. AUDUBON, B. of A. Vol. 6, p. 100, pl. 366. GIRAUD, Birds of Long island, p. 287.

CHARACTERISTICS. Subcrested. Chesnut; beneath whitish. Neck, above and sides rufous. Crown, quills and tail black. Length, 11·0.

DESCRIPTION. Bill compressed, pointed, very slightly arched towards the tip, 2·5 long. Body much compressed. Naked space on the tibia, very small. Tarsus with broad oblique scutellæ, robust, shorter than the middle toe and its claw. Edges of the mandibles minutely serrate; the serratures directed backwards: tip of the upper mandible slightly notched. Feathers of the neck and breast long, and loosely webbed.

COLOR. *Female:* Bill dusky black above, yellow on the sides and beneath. Feet yellowish green. Lores yellowish. Crown reddish brown, tinged with greenish, and bounded on each side with rufous: back of the neck light rufous. Back deep reddish brown. Tail purplish black; primaries tipped with rufous. Throat white, with a central brown line. Neck and beneath white, shaded with cream and dark brown narrow streaks along the shafts. *Male:* Upper part of the head, with the back, glossy dark green; sides of the head and hind part of the neck brownish red. Throat, neck and beneath reddish white. Breast black, tipped with rufous.

Length, 10·0 – 12·0.

This small Bittern is a southern species, appearing in New-York about the beginning of May, and is found throughout the State, where it breeds. Eggs yellowish green, unspotted. It prefers marshes and the borders of streams. It extends its migrations from Mexico to the 45th parallel, and is a permanent resident in Florida.

THE AMERICAN BITTERN.

ARDEA MINOR.

PLATE LXXXIII. FIG. 189.

(STATE COLLECTION.)

Bittern. PENNANT, Arct. Zool. Vol. 2, p. 451.
A. minor. WILSON, Am. Orn. Vol. 8, p. 35, pl. 65, fig. 3.
A. (Botaurus) minor. BONAPARTE, Ann. Lyc. Vol. 2, p. 307.
Botaurus id. BONAPARTE, Geog. and Comp. List, p. 48.
A. lentiginosa. RICHARDSON, F. B. A. Vol. 2, p. 374. SABINE, Frank. Journey. NUT. Man. Orn. Vol. 2, p. 60.
A. id. AUDUBON, B. of A. Vol. 6, p. 91, pl. 365. GIRAUD, Birds of Long island, p. 235.

CHARACTERISTICS. Subcrested. Rusty yellowish, mottled and sprinkled with deep brown: throat white, streaked with brownish. Crown, a line on each side of the neck, and primaries black or blue-black. Length, 27·0.

DESCRIPTION. Bill longer than the head, straight beneath, moderately arched above, stout, pointed, 4·0 in length, serrated on both mandibles, and on the upper notched near the tip. Tibia bare for nearly an inch above the joint. Hind nail robust, much incurved, 1·2 long. Middle toe and its claw longer than the tarsus. Feathers on the back of the head and neck loose and elongated. Tail small, rounded, and of ten feathers.

COLOR, of a male killed near the city, April 15: Chin and throat white, with a few light brown streaks. From the base of the lower mandible proceeds downwards a narrow rusty brown streak, becoming broad and black, and turning upwards on the back part of the neck, where it is lost. On the neck, breast and abdomen, the feathers are mottled reddish grey in the centre, margined with dusky, and the external parts light cream-yellow. Often the web of one side is entirely light cream, and the other web marked as above. Legs olive-green. Vent and under tail-coverts reddish white. Above minutely mottled with grey, brown and black-brown. In certain lights, a greenish metallic lustre is evident on the back, tertiaries and tail.

Length, 26·0 – 28·0.

The *American Bittern*, also familiarly known under the names of *Poke*, *Indian Hen*, *Indian Pullet*, *Look-up*, *Stake-driver*, and in Louisiana *Garde-soleil*, is a southern species, migrating northwardly in the spring, and retreating to the south in autumn. It appears along our maritime borders in April, and leaves us in October. It breeds in this State, laying three or four pale bluish eggs. It is a sly and solitary bird, preferring the depths of swamps and marshes, and feeding on meadow mice, aquatic reptiles, fishes, and the larger winged insects. *It has latterly been supposed identical with a specimen described and figured by Montagu in his *Ornithological Dictionary*, Suppl. verbo: "Heron freckled," the *A. lentiginosa*, which is accidental in Europe. Our species ranges between the thirty-eighth and fifty-eighth parallels.

THE BLACK-CROWNED NIGHT HERON.

ARDEA DISCORS.

PLATE LXXXI. FIG. 185.

Night Heron. PENNANT, Arct. Zool. Vol. 2, p. 450.
A. nycticorax. WILSON, Am Orn. Vol. 7, p. 101, pl. 51, figs. 2, 3.
A. (Botaurus) nycticorax. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 306.
A. discors. NUTTALL, Man. Orn. Vol. 2, p. 54.
Nycticorax americanus. BONAPARTE, Geog. and Comp. List, p. 48.
A. nycticorax. AUDUBON, B. of A. Vol. 6, p. 82, pl. 363. GIRAUD, Birds of Long island, p. 279.
Nycticorax gardenii. JARDINE, Am. Ornithology, Ed. Anglic. Vol. 3, p. 5.

CHARACTERISTICS. Crested. Whitish: crown and back greenish black; rump, wings and tail light drab: at the nuptial season, three long white occipital feathers. *Young*, brown streaked with whitish; beneath lighter streaked with grey. Length, 26·5.

DESCRIPTION. Bill stout, straight, slightly compressed, scarcely longer than the head, 4·5 long: upper mandible curved towards the tip, where it is strongly notched. Occipital feathers, when present, cylindrical, incurved, from eight to ten inches long, and so closely connected as often to appear like a single feather; the other feathers of the head and breast long, loose and silky. Tail short and slightly rounded, of twelve feathers. Hind claw stout and much curved. Tibia bare to an inch above the joint: tarsus longer than the middle toe.

COLOR. Bill black. Frontlet and all beneath white, with a faint tinge of dusky or yellowish on the abdomen: ridge of the wings white. Upper part of the head, and fore part of the back, glossy dark green. Space between the base of the bill and the eyes greenish blue. Legs yellowish. *Young:* Bill greenish yellow; above deep brown, streaked with light rufous, and triangular white spots on the wings; beneath dusky, streaked with white. Legs and feet light green. The long occipital feathers wanting.

Length, 25·0–28·0.

The *Black-crowned Night Heron*, or *Quawk*, has long been confounded with the *A. nycticorax* of Europe, to which it is closely allied in form and habits. To the American species, Mr. Jardine has applied the name of *N. gardenii*, and this has been transposed by subsequent writers to the European species. Mr. Nuttall, I think, first pointed out the distinction.

This species derives its popular name from the deep guttural cry, resembling that word in sound. It is a southern species, ranging from Mexico to the forty-fourth parallel. It appears with us about the beginning of April, and remains until quite late in the autumn. It breeds in this State, laying three or four bluish green eggs. It feeds on fish, aquatic reptiles, sea lettuce (*Ulva latissima*), grasshoppers and other large insects. Its flesh is generally esteemed. It is said to undergo three annual changes of plumage, before it reaches its perfect state for breeding. It is rarely seen except at twilight or during the night.

THE YELLOW-CROWNED NIGHT HERON.

ARDEA VIOLACEA.

PLATE LXXXVIII. FIG. 199.

(STATE COLLECTION.)

Ardea violacea. LINNÆUS, Syst. Nat. p. 238. PENNANT, Arct. Zool. Vol. 2, p. 448. WILSON, Am. Orn. Vol. 8, p. 26, pl. 65, fig. 1.
Botaurus id. BONAPARTE, Ann. Lyc. N. Y. Vol 2, p. 305.
White-crowned Heron. NUTTALL, Man. Ornith. Vol. 2, p. 52. AUDUBON, B. of A. Vol. 6, p. 89, pl. 364. GIRAUD, Birds of Long island, p. 280.

CHARACTERISTICS. Ash-colored. Crested. Crown, and oblong spot on each cheek yellowish white. Several long white occipital feathers: back with long loosely webbed occipital feathers. *Young:* Head and hind neck black, streaked with white; beneath soiled yellowish, with oblong spots of brown. Length, 21 inches.

DESCRIPTION. Bill stout, straight, compressed, 3·5 long, and 0·9 deep at the base. Upper mandible curved gently from the base, notched near the tip; edges serrate: nasal furrow deep, and extending to within 1·0 of the tip. Nostrils basal, pervious. A distinct scaly web between the outer and middle toe, and the rudiments of one between the middle and inner toe; hind claw large and much curved. Feathers on the crown ten to twelve, loosely webbed; two of these are from 3·0 to 4·0 long, with their short compact webs rolled in so much as to cause the feathers to appear cylindrical: third quill longest. Tail short, nearly even.

COLOR. Dorsal feathers black in the centre, margined with white; or otherwise the webs become loose and silky, of a slate blue. Crown, oblong dash on the cheeks, and long occipital feathers white, with a slight tinge of cream. In more southern specimens, where the plumage is more fully developed, these parts are pale reddish yellow, and the dorsal feathers extend beyond the tail. Primaries black. Sides of the head, cheeks, chin and upper part of the back of the neck black. Ridge of the wing white. All beneath slate-blue. Naked part of the tibia and tarsus yellow. *Young*, brown, streaked with white and rufous; base of the bill and feet greenish.

Length, 20·0 – 23·0.

This is a rare bird in this State, the specimen which furnished the drawing being the only one that I have seen within our territorial limits. It was killed on Long island near the salt-marshes, March, 1837. It is no where very abundant, or at least has not been often observed. This may be partly attributed to its nocturnal habits, which it shares with the preceding species. Mr. Audubon states that the crown assumes its yellowish tinge only during the breeding season. Eggs bluish green. Feeds on fish, salamanders, tortoises and other aquatic reptiles. Its geographical range is supposed to be from the equator to the forty-first parallel. It never goes far inland.

(*EXTRA-LIMITAL.*)

A. rufescens, Gm.; *pealii*, Bonap. (Aud. Vol. 6, p. 139, pl. 371.) Crested. Head, neck and breast purplish red: rest of the body slate-blue. Dorsal feathers elongated over the tail. Base of the bill flesh-colored: legs blue. *Young*, white. Length, 30·0. *Florida Keys.*

A. occidentalis. (Aud. B. of A. Vol. 6, p. 110, pl. 368.) Crested. White: bill, lores and feet yellow. Length, 54·0. *Florida Keys.*

FAMILY ROSTRIDÆ.

With many of the characteristics of the preceding species. Bill robust, longer than the head, enlarged at the tip, or knobbed, and deflected downward. Toes four; in some, the hind toe very small, and articulated high up. Neck and feet long. Nostrils basal, linear. Naked space of the tibia longer than the middle toe. Feet partially webbed.

Genus Platalea, *Linnæus.* Bill very long, much depressed, and spread out into a broad orbicular form at the tip.

P. ajaja, *Spoonbill.* (Aud. B. of A. Vol. 6, p. 72, pl. 362.) Rose-red. Whole head and chin bald. Head yellowish green. *Young*, white; dark chesnut when hatched. Length, 30·0. *South-Carolina, Florida.*

Genus Phœnicopterus, *Linneus.* Bill more than double the length of the head, straight, and higher than broad for half its length; then suddenly bent down, and ending in an obtuse point. Tibia bare for more than half its length.

P. ruber, Lin. (Aud. B. of A. Vol. 6, p. 169, pl. 375.) Red: quills black. *Young*, greyish white. Length, 45·0 – 50·0. *Florida Keys.*

FAMILY TANTALIDÆ.

Bill very long, robust at the base, curved downward towards the tip. Face naked. Throat dilatable. Hind toe resting on the ground.

Obs. This family contains between twenty and thirty species, distributed over the globe. Of these, four are found within the limits of the United States, and two only occasionally ascend as far north as this State.

Genus Tantalus, *Linnæus.* Bill stout, as wide as the face at its base, compressed, curving only at the point. Upper mandible notched, not furrowed. Nostrils not covered by a membrane. First and second quills subequal, longest.

T. loculator, Lin. (Aud. Ib. Vol. 6, p. 64, pl. 361.) White: face and head greenish blue; quills and tail black, with colored reflections; legs green, toes yellow. *Young*, dusky grey; quills and tail brownish. Length, 44·0. *North Carolina to Texas.*

GENUS IBIS. Cuvier.

Bill very long, stout at the base, slender and curved throughout its length. Upper mandible deeply furrowed in its whole length. Nostrils basal, linear, half closed by a membrane. Tibia bare to a large extent. Anterior toes connected by membranes at the base. Second quill longest.

THE WHITE IBIS.

Ibis alba.

Tantalus albus. Linnæus, Syst. p. 241. Pennant, Arct. Zoology, Vol. 2, p. 459.
Ibis alba. Vieillot, Nouv. Dict. Wilson, Am. Ornithology Vol. 8, p. 43, pl. 66, fig. 3. Bonaparte, Ann. Lyc. Vol. 2, p. 312; Geog. and Comp. List, p. 49. Nuttall, Man. Orn. Vol. 2, p. 86. Audubon, Birds of America, Vol. 6, p. 54, pl. 360. Peabody, B. of Mass. p. 365. Giraud, Birds of Long island, p. 275.

Characteristics. White: outer five primaries blue-black at the tips. Bill and feet reddish. *Female:* four outer quills black at the tips. *Young*, dull brownish; rump whitish. Length, 24·0.

Description. Bill rather subquadrate at the base, carinate above, 5·0 long; the point obtuse. Face bare and wrinkled. Nostrils basal: dorsal linear. Tibia bare for half its length, and covered with hexagonal scales. Anterior toes webbed to the first joint. Tail short, slightly emarginate.

Color. Bill red, dusky towards the tip. Plumage white, excepting the tips of the quills. *Young*, dull brownish; feet bluish; rump dull white; tail tinged with grey.

Length, 23·0 – 24·0.

The *White Ibis* appears at long intervals on the coast of this State, and has also been seen as far north as Massachusetts. Mr. Giraud has recorded two instances in 1836 and 1843, when it was obtained on Long island. Its present known geographical range is from 24° south to 41° north, but its habitual range is more restricted. It breeds from Florida southwardly. Eggs whitish, blotched with yellowish and spotted with reddish brown. Food crayfish (*Astacus*), aquatic insects and small fishes.

THE GLOSSY IBIS.

Ibis mexicanus.

Tantalus mexicanus. Ord, Jour. Acad. Nat. Sciences, Vol. 1, p. 53.
Ibis falcinellus. Bonaparte, Ann. Lyc. Vol. 2, p. 312; Obs. Nomen. Wils.; Am. Orn. Vol. 4, p. 23, pl. 23, fig. 1.
I. id. Nuttall, Man. Orn. Vol. 2, p. 88. Audubon, Birds of America, Vol. 6, p. 50, pl. 358.
I. ordi. Bonaparte, Geograph. and Comp. List, p. 49. Linsley, B. of Connecticut, p. 18.

Characteristics. Purplish red. Crown, middle of the back, wings and tail glossy metallic green. *Young:* Head and neck striped with blackish. Length, 24·0.

Description. Bill arched, and 5·0 long: feathers of the head and neck long and lanceolate. Tibia bare for half its length; middle toe dilated on its inner side, and toothed. First quill shorter than the second, and sinuate on the inner web near the end.

Color. Bill and feet black. The other markings sufficiently detailed in the specific phrase. *Young:* Back and scapulars brownish ash; beneath blackish ash. Wings and tail duller.

Length, 23·0 – 25·0.

This is a bird still more rare in this State than the preceding. I have introduced it here partly on the authority of a specimen in the American Museum, said to have been killed in the vicinity of New-York. Mr. Say received specimens from New-Jersey, and Mr. Nuttall informs us that a single specimen is sometimes offered for sale in the markets of Boston. The Rev. Mr. Linsley of Stratford, Connecticut, states that five individuals of this species were killed in that town about six years since. Breeds in Florida, Texas and Mexico. A rare visitor to the Middle States. Closely allied to, and for a long time considered identical with, the *I. falcinellus* of Europe. Its greatest known geographical range is from the equator to the forty-sixth parallel of north latitude.

(*EXTRA-LIMITAL.*)

I. rubra, Linn., Vieill. (Aud. B. of Am. Vol. 6, p. 53, pl. 359.) Scarlet: outer quills glossy blue-black towards their tips; face, bill and feet reddish. *Young*, ash-color, tinged with reddish; rump and beneath white. Length, 29·0. *Louisiana.*

FAMILY SCOLOPACIDÆ.

Bill generally long, slender, feeble, soft, cylindrical, mostly obtuse at the point. Face feathered. Legs long, or moderately so. Toes four, except in the genus Calidris. *Hind toe short, scarcely touching the ground. Anterior toes entirely divided, or united by a small membrane. Tibia partly naked.*

Obs. This family contains at present upwards of one hundred species, distributed over the globe. About twenty-eight are found in the United States, and of these we have to enumerate twenty-five observed in the State of New-York.

GENUS NUMENIUS. Latham.

Bill very long, slender, arched, rounded. Upper mandible longest, and furrowed throughout three-fourths of its length. Nostrils basal, oblong-linear, placed in the lateral groove. Toes connected at the base; hind toe bearing on the ground. Tibia moderately denuded. Tail short, rounded, and of twelve feathers.

THE LONG-BILLED CURLEW.

Numenius longirostris.

PLATE XCVI. FIG. 216.

(STATE COLLECTION.)

Numenius longirostris. Wilson, Am. Orn. Vol. 8, p. 23, pl. 64, fig. 4. Bonap. Ann. Lyc. N. Y. Vol. 2, p. 314. Richardson, F. B. A. Vol. 2, p. 376. Nuttall, Man. Ornithology U. S. Vol. 2. p. 95. Audubon, B. of Am. Vol. 6, p. 35, pl. 355. Giraud, Birds of Long island, p. 271.

Characteristics. Crown blackish, with whitish streaks, and no medial line. Rump uniform in color with the rest of the plumage: long axillary feathers, rusty, without bars. Bill 6·0 – 8·0, much arched. Length, 26·0.

Description. Bill long, slender, somewhat dilated at the tip, and curving most towards the extremity. Nail of the middle toe dilated at the base, slightly incurved, and pointed at the tip. First quill longest, acute. Tail much rounded.

Color. Above blackish brown (deepest on the back), spotted with grey and reddish. Chin, line over and round the eye soiled white. Bill deep brown. Legs bluish. Neck finely streaked with blackish brown. Beneath reddish buff, unspotted. Axillary feathers salmon-colored. Tail barred with pale rufous and brown.

Length, 25·0 – 27·0.

This Curlew is well known to our sportsmen along the coast, under the names of *Big Curlew* and *Sickle-bill*. It appears on the coast of this State, on its way to the north, about the middle of May, and again in August and September on its return. It does not confine itself exclusively to the seaboard, for it has been observed by Dr. Kirtland in Ohio, and by others in Kentucky and Missouri. There appears to be a great discrepancy of opinion as to its usual geographical range; for whilst some consider it as a straggler beyond South Carolina, others state that it extends to the 68th parallel. It is certain that they are abundant on the shores of this State during the season, and occasionally are seen here as late as the middle of November. Its food consists of small shells, insects, berries, worms and small crabs. The flesh with us is considered indifferent eating. Breeds in Texas, South-Carolina, and, as we suspect, much farther north.

THE JACK CURLEW.

Numenius hudsonicus.

PLATE XCVI. FIG. 215.

(STATE COLLECTION.)

Numenius hudsonicus. Latham, Ind. Orn. Vol. 2, p. 712.
Scolopax borealis. Wilson, Am. Orn. Vol. 7, p. 22, pl. 56, fig. 1.
N. hudsonicus. Bonaparte, Ann. Lyc. Nat. Hist. N. Y. Vol. 2, p. 314. Nuttall, Man. Orn. Vol. 2, p. 97.
N. id. Audubon, Birds of Am. Vol. 6, p. 42, pl. 356. Giraud, Birds of Long island, p. 272.

Characteristics. Crown deep brown, with a whitish medial line. Rump uniform with the rest. Axillary feathers barred with dark brown and reddish. Bill much arched. Length, 17·0.

Description. Bill shorter than in the preceding species, and much more regularly arched throughout. Tibia reticulated on the upper portion of the naked space, scutellate in front beneath. Tail short, slightly rounded.

Color. Above dull brown, with a few marginal whitish spots; the shafts of the feathers being of a deeper hue. An obscure whitish stripe over the eye: line from the base of the bill, through the eye, dark brown. Chin, belly, thighs and under tail-coverts white; the latter barred with brown on the sides: tail barred with dark brown and grey. Neck, breast and flanks streaked with brown and grey. Quills blackish brown, barred on their inner webs with dilated reddish white bars; the shaft of the first quill white; the others becoming gradually tinged with reddish. After the sixth, the quills become barred on both webs. Bill brownish black, flesh-colored at the base beneath.

Length, 16·0 – 18·0.

The *Jack Curlew*, or *Short-billed Curlew*, appears on the seacoast of this State at the same seasons, and migrates apparently through the same geographical range with the preceding. Like that species, too, it occurs far in the interior; for it has been noticed by Dr.

Kirtland in Ohio. It is very closely allied to the *Whimbrel* of Europe, with which it has been confounded. Its eggs are bluish grey, with black spots. Its food, berries, worms, aquatic insects, small marine mollusca, and the seeds of aquatic plants. It is not quite as abundant on our shores as the preceding species. Breeds in the northern regions.

THE SMALL ESQUIMAUX CURLEW.

NUMENIUS BOREALIS.

PLATE XCV. FIG. 214.

(STATE COLLECTION.)

Scolopax borealis. FORSTER, Phil. Tr. Lond. Vol. 62, p. 411.
Numenius id. LATHAM, Ind. Orn. Vol. 2, p. 712. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 314. ID. Am. Orn. Vol. 4, p. 118, pl 26, fig. 3. NUTTALL, Man. Orn. Vol. 2, p. 101. AUDUBON, B. of Am. Vol. 6, p. 45, pl. 357. GIRAUD, Birds of Long Island, p. 274.

CHARACTERISTICS. Crown blackish, with an indistinct medial line. Rump uniform with the back: axillary feathers banded with black and reddish. Tail nearly even; the feathers edged with white and barred with brown. Length, 15·0.

DESCRIPTION. Bill comparatively short and slender, slightly arched. First quill longest: some of the inner secondaries much elongated. Tail short, nearly even.

COLOR. Above blackish brown, mottled with rufous and grey. Upper part of the head dark brownish, streaked with yellowish brown: a faint medial line of greyish white on the crown. Chin and band over the eye white. Neck and breast yellowish grey, with dark brown streaks becoming arrow-headed beneath. Quills blackish brown, unspotted; the first white, except at the tip. Bill dusky: feet bluish.

Length, 13·5 – 16·0.

This species, which is known to our sportsmen under the names of *Little Curlew, Futes*, and *Dough-bird*, is much esteemed by epicures. Its appearance in this State in the spring has not been noted, and it is probable that its vernal migration is rapid and nocturnal, occurring possibly far inland. All that we know with certainty on the subject, is that it appears along our coast from the north about the end of August, and remains with us until November, when it proceeds southwardly. It is known to breed in high northern latitudes, laying 3 – 4 greenish eggs blotched with brown. According to Mr. Nuttall, this species has a wide geographical range, extending from Paraguay to the 70th degree of north latitude.

GENUS HEMIPALMA. Bonaparte.

Bill much longer than the head, and partly arched, dilated and studded with numerous tubercles at the tip. Tarsus very long, and the three anterior toes connected by a membrane as far as the first joint.

Obs. This small group, with the following, forms a passage from Numenius to the large genus Tringa.

THE LONG-LEGGED SANDPIPER.

Hemipalma himantopus.

PLATE LXXXVI. FIG. 196.

(STATE COLLECTION.)

Tringa (Hemipalma) himantopus. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 316.
T. id. Id. American Ornithology, Vol. 4, p. 89, pl. 25, fig. 3.
T. douglasii. Richardson, Northern Zoology, Vol. 2, p. 379, pl. 66.
T. himantopus. Id. ib. Vol. 2, p. 380.
T. id. et *douglassii.* Nuttall, Man. Orn. Vol. 2, pp. 139, 141.
T. id. Audubon, Birds of Am. Vol. 5, p. 271, pl. 334. Giraud, Birds of Long island, p. 232.

Characteristics. Tarsus and bill subequal. Rump white, barred with dusky. Above brownish black, edged with white; beneath reddish barred with dusky. Length, 8·5.

Description. Bill very long, slender, slightly arched: nasal groove extending nearly to the tip. Nostrils basal, linear, pervious. Tibia bare for an inch: tarsus long, slender, compressed; hind toe very small. Tail nearly even; the two middle feathers slightly longest.

Color. Above dusky; the feathers edged with reddish white: a whitish line over the eye. Ear-feathers reddish. Lores dusky. Quills brownish black; the shaft of the outer white. Rump and tail-feathers white, barred with blackish. Tail greyish ash; the feathers edged with dusky. Beneath, on the sides of the breast and belly, reddish barred with black. Bill black. Feet yellowish green. *Autumn* and *winter*, the plumage more greyish; the fore part of the neck whitish, streaked with grey: lores grey. Beneath soiled grey.

The discovery of this species is due to Messrs. Bonaparte and Cooper, and it is still exceedingly rare. Its history is yet incomplete. It is known to breed in high northern latitudes. In the spring, it is very abundant in Texas. In this State, a single specimen has been obtained in May; others have been procured here in July, August and September, probably then on their way south. Their vernal migration is presumed to be rapid. Their habits allied to those of the Sandpipers.

GENUS HETEROPODA. Nuttall.

Bill straight, rather enlarged, and punctate at the extremity. Tarsus moderate: the three anterior toes united at base by a membrane; the outer to the middle toe, as far as the first joint.

Obs. A small artificial group, connected with the following genus.

THE SEMIPALMATED SANDPIPER.

Heteropoda semipalmata.

PLATE LXXXVI. FIG. 195.

(STATE COLLECTION.)

Tringa semipalmata. Wilson, Am. Ornithology, Vol. 7, p. 131, pl. 63, fig. 4.
T. (Hemipalma) id. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 316.
T. id. Richardson, F. B. A. Vol. 2, p. 381.
T. (Heteropoda) id. Nuttall, Man. Orn. Vol. 2, p. 136.
Heteropoda id. Bonaparte, Geog. and Comp. List, p. 49. Audubon, B. of Am. Vol. 5, p. 277, pl. 336.
T. id. Kirtland, Zool. Ohio, p. 165. Giraud, Birds of Long island, p. 230.

Characteristics. Bill somewhat shorter than the head, straight. Rump blackish: middle tail-feathers longest; beneath white. *Winter*, dark ash above. *Summer*, mixed grey and rufous above. Length, 6·0.

Description. Bill enlarged and flattened towards the end, rugose and acutely pointed at the tip. Tibia naked for about a fourth of its length: tarsus moderately long, compressed; hind toe short. First quill longest. Tail with its feathers pointed, short; the middle feathers longest.

Color. Bill black; the legs dusky olive approaching to black. Upper part of the head, cheeks, and back and sides of the neck greyish ash streaked with dusky; the remaining upper parts dusky brown; the feathers edged with greyish and rufous. Frontlet, and line over the eye light grey. Quills dusky, rather lighter on their inner vanes. Beneath entirely white, except the breast and front of the neck, which are ash-grey with darker streaks.

Length, 5·5 – 6·5.

This little Sandpiper, for a bird of its small size, varies greatly in its dimensions: the females are largest. It ranges from the Antilles to the borders of the Artic circle, breeding from Labrador northwardly. It appears in this State in May, and many remain with us during the whole summer and late in the autumn. I have shot them in the early part of August, on the seacoast of Long island; from which I infer that some at least breed there. It is not only common along the seaboard, but in the interior on our great lakes, and has been observed on the Columbia river. Eggs white, spotted with brown. Its incubation, according to Mr. Audubon, takes place in Labrador, from the middle to the end of August. It resembles very much the *T. pusilla*, but is easily distinguished by its feet and bill.

GENUS TRINGA. Brisson.

Bill moderate, equal to the head or slightly longer, straight or very slightly curved, soft and flexible for its whole length, compressed at the base, somewhat dilated and flattened at the tip: both mandibles furrowed on each side to their tips. Nostrils basal, linear, pervious, covered by a membrane. Hind toe very short, scarcely touching the ground; fore toes slender, divided.

THE PURPLE SANDPIPER.

Tringa maritima.

PLATE LXXXVII. FIG. 198.

(STATE COLLECTION.)

Tringa maritima. Brunnich, Orn. Boreal. No. 182.
Striated and *Selninger Sandpiper.* Pennant, Arct. Zool. Vol. 2, pp. 472, 480.
T. maritima. Bonaparte, Ann. Lyc. Vol. 2, p. 318. Richardson, F. B. A. Vol. 2, p. 382. Nuttall, Man. Orn. Vol. 2, p. 115. Audubon, B. of A. Vol. 5, p. 261, pl. 330. Giraud, Birds of Long island, p. 236.

Characteristics. Bill longer than the head, scarcely curved at the point, compressed and orange-yellow at the base; rump black: feet yellow. Middle tail-feathers longest. Tibia feathered low down. Length, 9·0.

Description. Bill slender, slightly curved. Only a small space of the tibia above the joint bare; tarsus shorter than the bill. Tail short and rounded.

Color. Above purplish black, varied with white and rufous. Head and neck uniform in color, without spots or stripes. Quills brownish black; their shafts white. Breast, sides and belly whitish, with blackish spots and streaks. *Winter*, beneath grey; the purple tints above not so distinct.

I know little of this species, except from a specimen which I obtained on Long island in June. It is, I believe, exceedingly rare on our coast. It is a northern species, breeding at Hudson's Bay; the eggs are yellowish grey, with crowded brown spots at the larger end. It occasionally extends its southwardly migration to the shores of this State.

THE BUFF-BREASTED SANDPIPER.

TRINGA RUFESCENS.

PLATE LXXXVII. FIG. 197.

(STATE COLLECTION.)

T. rufuscens. VIEIL. Gal. Ois. de l'Am. Vol. 2, p. 105, pl. 238. ID. Nouv. Dict. 2d Ed. Vol. 34, p. 470. YARRELL, Linn. Tr. Vol. 16, p. 109, pl. 11. SELBY, Illust. Vol. 2, p. 142, pl. 27, fig. 1. NUTTALL, Man. Orn. Vol. 2, p. 113. AUDUBON, B. of A. Vol. 5. p. 264, pl. 331. GIRAUD, Birds of Long island, p. 230.

CHARACTERISTICS. Bill small, slender, shorter than the head. Tail cuneate; the outer feathers light brown edged with white. Rump blackish above, varied with black and rufous; beneath buff. Length, 8·5.

DESCRIPTION. Bill nearly straight, 0·9 long, slightly curved, attenuated towards the tip, which is slightly enlarged, polished and depressed: lower mandible feathered beneath for nearly one half its length. Naked space of tibia 0·6. Middle toe with its nail, and the bill, subequal: hind toe very small.

COLOR, in a specimen shot on Long island, September 24. Frontlet, sides of the head, neck, breast, belly, vent and under tail-coverts light buff; very little paler on the belly and vent. Crown dusky, streaked with greyish rufous; the centre of the feathers being black, and the margins rufous. Nape rufous, minutely and sparsely streaked with brown. Upper tail-coverts, and the two central tail-feathers, black bordered with rufous; lateral tail-feathers light brown, bordered with dusky and tipped with white. Secondaries mottled in undulating lines, in the same manner with the primaries.

Length, 8·0 – 9·0.

This is a northern species, rarely seen south of New-York, although its first describer obtained his specimen from Louisiana. It is not common here, although occasionally found in the markets of New-York for sale. It has been seen in Ohio. It has been accidentally found in Europe. Its history is incomplete.

THE CURLEW SANDPIPER.

TRINGA SUBARQUATA.

PLATE XCV. FIG. 213.

(STATE COLLECTION. CABINET OF THE LYCEUM.)

Tringa subarquata. TEMMINCK, Vol. 2, p. 609. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 317.
T. id. NUTTALL, Man. Orn. Vol. 2, p. 101. AUDUBON, B. of Am. Vol. 5, p. 269, pl. 333. GIRAUD, Birds of Long island, p. 236.

CHARACTERISTICS. Bill much longer than the head or tarsus, and somewhat curved. Rump white: middle tail-feathers longest, acuminate. Naked space of tibia 0·75. *Summer*, bright bay. Length, 8·0.

DESCRIPTION. Bill slender, subcylindrical, slightly arched, scarcely enlarged towards the tip, and 1·6 long. Tarsus compressed, 1·1: hind toe very small.

COLOR. *Winter*, cinereous. Forehead, streak over the eye, upper tail-coverts, and all beneath white; this is also nearly the plumage of the young, in which we notice the light buff on the sides of the neck and breast. *Summer*, general color bright bay. Crown and back blackish, streaked and margined with rufous. Nape pale reddish, with a few obscure dusky streaks. The female represented in the figure, killed in July, has the face, line over the eye and chin light grey; beneath, the neck, breast and belly chesnut-red, varied with white, and with faint curved darkish bars.

Length, 7·5 – 8·5.

This is another rare northern species, and common to Europe and America. It breeds in high northern latitudes, and descends in small numbers as low as New-York, although it has been seen in Florida. Mr. Bell informs me that he has seen it occasionally exposed for sale in the market at New-York. The two specimens in the State Collection were obtained in the months of July and September. The Prince of Canino, in his Geographical List, arranges this and the following four species under the genus PELIDNA of Cuvier.

THE BLACK-BREASTED SANDPIPER.

Tringa cinclus.

PLATE LXXXIV. FIG. 192 (B, ADULT, summer; A, YOUNG).

Tringa cinclus, Linnæus. *Dunlin*, Pennant, Arct. Zool. Vol. 2, p. 476.
T. alpina. Wilson, Am. Orn. Vol. 7, p. 25, pl. 56, fig. 2 (summer). *T. cinclus*, Id. Ib. p. 39, pl. 57, fig. 2 (winter).
T. alpina. Bonaparte, Ann. Lyc. Ann. Lyc. N. Y. Vol. 2, p. 317. Richardson, F. B. A. Vol. 2, p. 383.
T. id. Nuttall, Man. Orn. Vol. 2, p. 106. Audubon, B. of A. Vol. 5, p. 266, pl. 332 (summer and winter). Giraud, Birds of Long island, p. 228.

Characteristics. Bill black, slightly curved, longer than the head: rump blackish; tarsus 1·0. Two middle tail-feathers longest. *Summer*, black and rufous above; black and dull whitish beneath. *Winter*, blackish brown above; white beneath. Length, 8·0.

Description. Bill 1·5 long, slender, slightly arched towards the point. Tibia bare for some distance above the joint. Tail short, almost even, but the two middle feathers longest.

Color. *Winter:* Above dark brownish; throat, breast and beneath white, streaked with dusky. *Summer:* Upper part of the head, back and scapulars chesnut red; the feathers darkest in the centre. Tail brownish; the two central feathers darker. Forehead, sides, and front and sides of the neck grey, tinged with rusty, and streaked with brown. A conspicuous large patch of black on the breast: belly white. *Young:* Greyish above, varied with dusky and slightly tinged with rufous. Sides of the head and neck streaked with dark grey.

Length, 7·5 – 8·5.

This species is common on the coast of New-York, which it reaches in April, and is then called *Black-breast*. It migrates northwardly to breed, and returns to us in the autumn, when its plumage is so changed that it obtains another name, and is then called *Winter Snipe*. It remains with us all winter, and is much esteemed by epicures. It extends southwardly to Texas. Breeds in the north of Europe and America. I have followed Bonaparte in adopting the specific name of *cinclus*.

SCHINZ'S SANDPIPER.

TRINGA SCHINZI.

PLATE LXXXIV. FIG. 191.

(STATE COLLECTION.)

Tringa schinzi. BREHM, Lehr. Eur. Vogel, Vol. 2, p. 571.
Pelidna cinclus, var. SAY, Long's Expedition, Vol. 1, p. 172.
T. schinzi. BONAPARTE, Ann. Lyc. N. Y. Vol 2, p. 317. Id. Am. Orn. Vol. 4, p. 69, pl. 24, fig. 2 (winter).
T. id. RICHARDSON, F. B. A. Vol. 2, p. 384. NUTTALL, Man. Orn. Vol. 2, p. 109.
T. id. AUDUBON, B. of A. Vol. 5, p. 275, pl. 335. GIRAUD, Birds of Long island, p. . . .

CHARACTERISTICS. Bill 1·0, nearly straight, entirely black. Rump blackish. Tarsus 0·7. Middle tail-feathers longest. *Summer*, blackish varied with rufous; beneath black and white. *Winter*, ashy brown; beneath white. Length, 7 inches.

DESCRIPTION. Bill slender, compressed at the base, slightly enlarged near the end, and obsoletely pitted. Tibia baro for one third of its length. Hind toe very small. Wings very long; secondaries reaching nearly to their tips. Tail nearly even.

COLOR, of a specimen shot May 10. Brownish black mixed with rufous. Head striate with black and rufous. Nape grey, finely streaked with brown. Back, scapulars and wing-coverts blackish, margined with grey and rufous: primaries blackish brown. Upper tail-coverts pure white; a few of the outer ones brownish on their outer webs near the tips. Chin and throat yellowish white; a faint greyish stripe over the eye. Ear-feathers light rusty. Breast all round marked with interrupted longitudinal fine brown lines; flanks with larger brown spots; the remaining parts beneath whitish. In some individuals, according to Audubon, six of the middle tail coverts are black; the lateral ones barred with dusky and white.

Length, 6·5 – 7·5.

This little Sandpiper is not very abundant in this State. It breeds in high northern latitudes, and descends to the United States in the autumn, extending itself to Florida, and found in the interior. Returns to the north in the spring, to breed. Eggs yellowish grey, spotted with chesnut brown. It occurs in various parts of the State, near lakes and the smaller streams. Its geographical range is stated to be between the 25th and 55th parallels, and perhaps still farther north.

THE PECTORAL SANDPIPER.

TRINGA PECTORALIS.

PLATE LXXXV. FIG. 193.

(STATE COLLECTION.)

Pelidna pectoralis. SAY, App. Long's Expedition, Vol. 1, p. 171. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 318.
T. id. BONAPARTE, Am. Orn. Vol. 4, p. 43, pl. 23, fig. 2. NUTTALL, Man. Orn. Vol. 2, p. 111.
T. id. AUDUBON, B. of A. Vol. 5, p. 259, pl. 329. GIRAUD, Birds of Long island, p. 233.

CHARACTERISTICS. Bill compressed and dull yellowish at the base, 1·1 long, and subequal with the tarsus. Rump black: middle tail-feathers longest. Feet olive. *Summer*, black and rufous; beneath white; breast ash tinged with reddish, and streaked with dusky. *Winter*, brownish ash; beneath white. Length, 9·0.

DESCRIPTION. Bill slender, straight; the point obtuse. Nostrils basal, linear, pervious. Tibia bare for about one-third of its length. Neck short. Middle tail-feathers pointed and elongated; the others rounded.

COLOR. Head reddish brown; the central part of each feather dusky brown. Lores dusky: an obsolete whitish stripe over the eye. All the upper parts blackish brown; the feathers edged with reddish: quills dusky. Middle tail-feathers colored and edged like those of the back; the others grey, edged and tipped with white. Breast and sides of the neck dusky brown, marked with interrupted series of darker brown lines. Chin and all beneath white. In *winter*, the reddish hue above is not so distinct, and all beneath white.

Length, 8·5 – 9·5.

The history of this little sandpiper is far from being complete. It is supposed to breed at the north, but the precise facts connected with its incubation are unknown. It has hitherto been observed from Maine to Maryland, but its geographical range is doubtless more extended. A few are seen on our coast in the spring, but the greatest number appear from August to November, when they are very fat and well-flavored. It passes under the various names of *Meadow Snipe*, *Jack Snipe*, *Short-neck*, and according to Mr. Giraud it is called *Fat-bird* on the coast of New-Jersey. Occasionally it occurs in great numbers along the coast of this State, but in some years it is very scarce. It has been accidentally found in Europe.

THE RED-BREASTED SANDPIPER.

TRINGA CANUTUS.

PLATE LXXXV. FIG. 194. — PLATE XCVII. FIG. 218.

(STATE COLLECTION.)

Tringa canutus, LINNÆUS. GM. Syst. Nat. p. 679. PENNANT, Arct. Zool. Vol. 2, p. 476.
T. cinerea. WILSON, Am. Orn. Vol. 7, p. 36, pl. 57, fig. 2 (young).
T. rufa. ID. Am. Orn. Vol. 7, p. 43, pl. 57, fig. 5 (summer).
T. islandica. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 320.
Knot. RICHARDSON, F. B. A. Vol. 2, p. 387.
T. cinerea. NUTTALL, Man. Orn. Vol. 2, p. 125.
T. canutus. BONAPARTE, Geog. and Comp. List, p. 49.
T. islandica. AUDUBON, Birds of Am. Vol. 5, p. 254, pl. 328 (summer and winter).
T. id. GIRAUD, Birds of Long island, p. 224.

CHARACTERISTICS. Bill straight, 1·5 long. Rump white, barred with black: tail even. *Summer*, black, ash and reddish; beneath bright chesnut or bay. *Winter*, pale ash; beneath white. *Young*, ash varied with black and white; beneath white. Length, 10·0.

DESCRIPTION. Bill slender, straight, slightly enlarged and depressed near the blunt point. Tibia bare for one-third of its length, or 0·6. Toes with a narrow membrane. Tail nearly even.

COLOR. *Summer:* Bill and feet black. Crown grey, streaked with black; nape tinged with reddish: above ash-colored, mottled with black, white, and rufous. Quills blackish brown, with white shafts. Axillary feathers white, barred with brown. Chin, throat and all beneath bright chesnut red; stripe over the eye somewhat paler. Tail ash-brown, bounded by dusky brown and tipped with white. Middle of the abdomen, vent and under tail-coverts white, tinged with chesnut. *Winter:* Bill and feet greenish black or yellowish: upper parts ash-grey; each feather bordered with lighter grey. Stripe over the eye, throat and middle of abdomen white. Beneath white, streaked with brown, and with transverse brownish bars. *Young*, dark ash above; a tinge of reddish or buff on the throat and breast, and a dark band from the bill to the eye.

Length, 9·5–10·5.

This bird presents such varieties in its plumage, dependant upon age and season, as to have received several different names. We follow Bonaparte in restoring its primitive linnean name. It is common to Europe and America. The *Robin Snipe*, as it is called by our sportsmen, appears on the shores of this State in May, on its way to the high northern latitudes to breed. Eggs four, dun-colored, thickly marked with reddish spots. On its re-

turn southwardly, it appears in large flocks along our coast from the middle of August until the beginning of October. At this period the red plumage beneath disappears, giving place to a white plumage spotted with dusky, ash-colored above; when it is called *White Robin Snipe*, and *Grey-back*. Farther south, in its spring dress, it is called *May-bird*. Many pass the winter in Florida, but its ascertained geographical range is from the tropics to 75° north latitude. This much esteemed bird feeds on worms and minute shellfish.

WILSON'S SANDPIPER.

Tringa pusilla.

PLATE XCII. FIGS. 207, 208.

Tringa pusilla. Wilson, Am. Orn. Vol. 5, p. 32, pl. 37, fig. 4.
T. (Palidna) id. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 319. Richardson, F. B. A. Vol. 2, p. 386.
T. wilsoni. Nuttall, Man. Orn. Vol. 2, p. 121. Audubon, B. of A. Vol. 5, p. 280, pl. 337.
T. id. Giraud, Birds of Long island, p. 240.

Characteristics. Small. Bill 0·7, straight, and subequal with the tarsus. Rump and upper tail-coverts black: secondaries nearly as long as the quills. *Summer*, blackish and rufous; beneath white. *Winter*, ash: beneath whitish spotted with dusky. Length, 5·5.

Description. Bill slender, compressed, tapering, depressed at tip. Neck short. Tibia bare for one-fourth of its length. Hind toe very small. Tail doubly emarginate.

Color. *Summer*: Bill dusky green. Above dark brownish black; the feathers margined with reddish: neck ash with dark spots. Wings dusky black; the coverts tipped and edged with black. Lores dusky; chin and stripe over the eye whitish. Cheeks and sides of the neck reddish ash, streaked obscurely with dusky. Beneath white or soiled white, occasionally spotted with brown. Fig. 208 represents an individual in the State Collection, larger, and with a proportionately longer bill; the upper parts are of an ashen hue; the breast and sides of the neck spotted with brown. It came into my possession without any memorandum as to its sex or season, but I suppose it to be a female in its winter dress.

Length, 4·5–5·5.

This little sandpiper, commonly known as the *Peep*, from its usual note, and as the *Ox-eye*, from the size and brilliancy of its eye, is one of our most abundant species. It pervades the whole of North America from Mexico to 68° north latitude; occurring equally on the coast, and through the interior to Columbia river. It breeds from Labrador to the Arctic circle. Except during its short breeding season, it is a resident on the coast of this State. In September and October, it is in good order; and though small, is exceedingly savory. Eggs three to four, cream-yellow, blotched and dotted with reddish brown. Food, larvæ, minute shellfish, and insects on the salt-marshes.

GENUS CALIDRIS. Illiger.

Characters of the preceding genus, but with three toes only, all divided to the base. Bill straight, short.

THE SANDERLING.

Calidris arenaria.

PLATE XCI. FIG. 205.

(STATE COLLECTION.)

Tringa arenaria, Lin. 12 ed. p. 251. *Charadrius calidris*, Gm. (young).
Sanderling, and *Ruddy Plover*. Pennant, Arct. Zool. Vol. 2, p. 486.
Calidris arenaria. Illiger, Prodromus System. Mamm. et Avium, p. 249. *Id.* Temminck.
Charadrius calidris. Wilson, Am. Orn. Vol. 7, p. 68, pl. 59, fig. 1 (winter); *rubidus*, Id. Vol. 7, p. 129, pl. 63, fig. 3 (summer).
T. (Calidris) arenaria. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 320.
Sanderling Plover. Nuttall, Man. Orn. Vol. 2, p. 4.
C. id. Audubon, B. of Am. Vol. 5, p. 287, pl. 338. Richardson, F. B. A. Vol. 2, p. 336. Giraud, Birds of Long island, p. 242.

Characteristics. Bill straight, shorter than the head. *Winter*, ash grey above; beneath white. *Summer*, reddish mixed with white and black above; beneath white. Length, 7 inches.

Description. Bill short, straight, higher than broad at the base, attenuated in the middle and again dilated towards the tip, 1·0 long. Tail short; the middle and outer feathers longest. Toes with a warty membrane on each side.

Color. *Summer:* Bill and feet black. Above black; the feathers bordered with rusty, and margined with white. Head grey, striate with black and rufous; nape paler. Quills dark brown on the outer webs, with their shafts white. Central tail-feathers acuminate, dark; the others soiled brown, whitish at their bases. *Winter:* Above light ash; head streaked faintly with brown. Central tail-feathers margined with white. Quills brownish black. All beneath white. Bill and feet black.

This is another of the *Beach-birds*, which changes its upper reddish summer plumage for the grey livery of winter. It is said to occur all over the globe. In this country, it has been traced as high as 60° north. It occurs on the coast in small numbers in May, on its way to its breeding places in high northern latitudes; and again in large flocks about the middle of August, on its return south. There is, in fact, but few months in the year in which it may not be met with. I have obtained them from March to November. The *Sanderling* is chiefly found on the coast near the surf, feeding on small marine worms, and the smaller shell fish and crustacea. Its eggs are dusky, spotted with black. Although small, it is very fat in the autumn, and much esteemed by epicures.*

* Here would naturally come the *M. pugnax*, or *Ruff* of Europe, which has recently been introduced into our ornithology. I had introduced it in a previous report on the Fauna of this State, and described and figured the identical specimen noted by Messrs. Nuttall and Cooper. (See fig. 217, plate 97, which was inadvertently admitted into this volume.) I have, however, every reason to believe that its supposed occurrence on Long island originated in an unworthy trick played off by a collector now deceased.

GENUS TOTANUS. Bechstein.

Bill straight, longer than the head, subcylindrical, flexible at base. Upper mandible channelled through half its length, slightly exceeding the lower in length. Nostrils in the furrow, basal, linear, pervious. Legs long and slender: tibia bare for half its length. Feet four-toed; the anterior or the outer only connected at base by a membrane: hind toe small, touching at the tip.

Obs. This genus has been subdivided by ornithologists into groups, which have been elevated by European writers into the rank of genera. The first species is arranged under the genus Actitis of Boié.

THE SPOTTED SAND-LARK.

Totanus macularius.

PLATE XCI. FIG. 206.

(STATE COLLECTION.)

Tringa macularia. Linnæus, Syst. p. 249. Pennant, Arct. Zoology, Vol. 2, p. 473.
T. id. Wilson, Am. Orn. Vol. 7, p. 60, pl. 59, fig. 1.
Totanus id. Ord's Reprint, p. 64.
Tringa id. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 325. Nuttall, Man. Orn. Vol. 2, p. 162.
T. (Actitis) id. Bonaparte, Geog. and Comp. List, p. 51. Audubon, Birds of Am. Vol. 5, p. 303, pl. 342. Giraud, Birds of Long island, p. 257.

Characteristics. Glossy olive brown, waved with blackish. Rump and tail similar; spotted beneath. Three outer tail-feathers white, barred with black. Quills dark olive brown, with a white spot on most of the inner webs. Length 8·0.

Description. Bill straight, about as long as the tarsus, slightly arched at the tip, 0·9 long. Tail rounded; the middle feathers longest. Tibia bare for half its length. The web between the outer and middle toe largest.

Color. Bill greenish olive above; yellowish beneath. Crown with obscure dusky stripes. Lores dusky. Stripe over the eye and the eyelids whitish. Ear-feathers dusky; axillary feathers pure white. Quills slightly tipped with white; secondaries tipped with white, and forming a broad band over the wings. Legs greenish yellow. Middle tail-feathers glossy olive, obsoletely barred. Chin, throat and all beneath white, thickly spotted or almost striated with brown on the neck. Abdomen, vent and sides with distant round dark spots.

Length, 7·9–8·3.

This is a familiar bird, found in small families along every stream, and the borders of ponds and lakes throughout the Union. It is known in the books under the names of *Spotted Sandpiper* and *Tattler*, but is better known among the people by the name of *Peet-weet*, in allusion to its notes; or of *Teeter* and *Tiltup*, from its often repeated grotesque jerking motions. It appears with us in April from its southern winter quarters, and disappears about the beginning of November. It breeds in this State and farther north, laying pale yellowish eggs, which are spotted with dark brown. Food, insects and worms. It ranges from Mexico to the 57th parallel, and has been accidentally found in Europe.

THE GREY PLOVER.

Totanus bartramius.

PLATE XCIII. FIG. 209.

(STATE COLLECTION.)

Tringa bartramia. Wilson, Am. Orn. Vol. 7, p. 63, pl. 59, fig. 2.
Totanus id. Ord's reprint, p. 67. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 325. Rich. F. B. A. Vol. 2, p. 391.
Tringa id. Audubon, B. of A. Vol. 5, p. 248, pl. 327.
Totanus (Euliga) id. Nuttall, Man. Orn. Vol. 2, p. 168.
Actiturus id. Bonaparte, Geog. and Comp. List, p. 51. Giraud, Birds of Long island, p. 226.

Characteristics. Bill short, somewhat curving from near the middle. Wings much shorter than the tapering tail: first quill barred on the inner web. Length, 12·5.

Description. Bill scarcely longer than the head, slender, straight, curving near the tip, 1·1 long, and subequal with the tarsus. Tibia bare for nearly half its length. Inner toe cleft to the base. Tail much rounded, exceeding the tips of the wings.

Color. Bill yellowish at the base, dusky at the tip, legs yellowish green. Crown dark brown, with a central yellowish brown line. Upper parts greyish, more or less tinged with rufous. Axillaries and lower wing-coverts white, banded with dusky. Eye with a light space around it. Throat whitish, unspotted: throat and breast yellowish, with dusky lines; arrow-headed spots beneath. Shaft of the first quill white; the others dusky. Two middle tail-feathers dark olive brown, barred with black; edges cream-colored; the outer white: all barred with black.

Length, 12·0 – 13·0.

This much esteemed game bird is very shy, and requires great caution and skill on the part of the sportsman. It is known under the various names of *Grey Plover*, *Grass Plover*, *Upland Plover* and *Field Plover*. In the books it is described under the names of *Bartram's Tatler*, and *Sandpiper*. It ranges from Texas to the Arctic circle, and breeds from Maryland northwardly. It is not a coast bird, but roams and breeds freely through the interior. The eggs are dull yellow, with brownish spots. Feeds on grasshoppers. In July and August it appears in large flocks on its way to the south. It leaves us in September.

THE YELLOW-LEGS.

Totanus flavipes.

PLATE XCIV. FIG. 212.

Scolopax flavipes, Gmelin. *Yellow-shanks Snipe*, Pennant, Arct. Zool. Vol. 2, p. 468.
S. id. Wilson, Am. Orn. Vol. 7, p. 55, pl. 58, fig. 1.
Totanus id. Ord's reprint, p. 59. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 324. Sabine, Franklin's Journey.
T. id. Richardson, F. B. A. Vol. 2, p. 390. Nuttall, Man. Orn. Vol. 2, p. 152.
T. id. Audubon, B. of A. Vol. 5, p. 313, pl. 314. Giraud, Birds of Long island, p. 250.

Characteristics. Dusky, spotted with black and white. Tail dull white, barred with brown. Bill black, straight: feet yellow, and longer than the bill. Length, 10·0.

Description. Bill slender, straight, 1·5 long, and turning down at the tip. Feet very long. Tibia bare for half its length. Tail short, rounded.

Color. Crown streaked and spotted with brown and grey. Neck grey, streaked with brownish. Above blackish brown, varied with white, grey and rufous. Quills dark brown; the shaft of the first quill white. Space round the eye, and a line from the bill to the eye, white. Chin, throat and beneath white, streaked on the neck with dark grey, and barred with the same on the sides. Axillaries barred with brown. Rump white; tail-feathers white, with six to eight brown bars towards the tips.

Length, 9·5 – 10·5.

This small species, which is described under the name of *Yellow-shank Tatler*, appears in this State in the early part of May, on its way north to breed. Many, however, breed in this State; but the greater number go farther north. During the months of August and September, they appear again in large flocks on their southern migration. During both migrations, they spread in every direction through the interior. Its food consists of insects, worms, and small aquatic animals. It ranges from Mexico, where it was seen by Lichtenstein, to the sixty-eighth parallel of north latitude. Its history is yet incomplete.

THE SOLITARY TATLER.

TOTANUS CHLOROPYGIUS.

PLATE XCIII. FIG. 210.

(STATE COLLECTION.)

Totanus chloropygius, VIEILLOT.
Tringa solitaria. WILSON, Am. Orn. Vol. 7, p. 53, pl. 58, fig. 3.
T. glareolus. ORD, reprint, p. 57.
T. chloropygius. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 325. RICHARDSON, F. B. A. Vol. 2, p. 393.
T. id. NUTTALL, Manual Ornith. Vol. 2, p. 159.
T. solitaria. AUDUBON, B. of A. Vol. 5, p. 309, pl. 343. GIRAUD, Birds of Long island, p. 256.

CHARACTERISTICS. Olive brown, with light green reflections, and spotted with whitish. Rump and middle tail-feathers brown. Tail white, broadly barred with blackish. Quills and their shafts brownish black. Length, 8·0.

DESCRIPTION. Bill slender, straight, flexible, the tip slightly turned over, 1·25 long. Tibia bare for half its length. Outer web largest. First and second quills nearly equal. Tail short, slightly rounded.

COLOR. Bill black, tinged with green: feet light greenish. A line of dull white from the mandible over the eye. General color above is deep brown, with greenish reflections; the feathers tipped and edged with small white spots. Head and neck greyish brown. Chin and throat greyish; the sides streaked with brown. Beneath light grey, occasionally obscurely undulated with darker. Axillaries barred with dusky: middle tail-feathers, on their edges, slightly spotted with white.

Length, 7·5 – 8·5.

This little bird is, as its name indicates, a solitary and shy species. It is called the *Green-rump Tatler*, *Wood Tatler*, and the *Jack Snipe*, in various places in the interior. Its breeding is almost coëxtensive with its geographical range, having been observed from Louisiana to the Fur countries. It appears in this State in May, and leaves us in September. The eggs are greenish yellow, with umber spots more numerous in a circle about the larger end. Ranges from Mexico to the sixty-first parallel.

THE VARIED TATLER.

Totanus melanoleucus.

PLATE XCIV. FIG. 212.

(STATE COLLECTION.)

Scolopax melanoleuca, Gmelin. *Spotted Snipe*, Pennant, Arct. Zool. Vol. 2, p. 467.
S. vocifera, Telltale Godwit. Wilson, Am. Orn. Vol. 7, p. 57, fig. 5.
Totanus melanoleucus, Vieillot. Ord, reprint of Wilson, p. 61. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 324.
T. vociferus. Richardson, F. B. A. Vol. 2, p. 389. Nuttall, Manual Orn. Vol. 2, p. 148.
T. id. Audubon, B. of A. Vol. 5, p. 316, pl. 345. Giraud, Birds of Long island, p. 252.

Characteristics. Ashy brown, spotted with black and white: rump white. Tail white, barred with brown: legs yellow. Bill entirely blackish. Length, 14·0.

Description. Bill slender, straight, flexible, drooping at the tip, and 2·1 long. Tibia bare for half its length. Tail irregularly even. Hind toe considerably elevated: a short sinuate web between the outer and middle toes. Tertiaries emarginate.

Color. Above blackish brown, margined with grey. Head and neck streaked with brown and grey. Quills plain brownish black; the shaft of the first white. Tail white, with from six to eight angular brown bars. Beneath, the chin and upper part of the throat soiled white: neck streaked with dusky brown. Abdomen white, with distant brown spots. Flanks, axillaries and under tail-coverts with angular brown bars. *Winter*, ash brown above; breast minutely mottled with zigzag brown lines. Bill black: legs bright yellow.

Length, 13·5 – 14·5.

This bird is the *Big Yellow-leg*, or *Winter Yellow-leg* of our sportsmen. It appears with us about the middle of May, and breeds from New-Jersey northwardly. Its principal food consists of marsh insects, small shrimps, etc. It breeds chiefly in high latitudes, and returns to this State about the end of August, where many remain (if the season is open) until December. It extends through the interior to the plains of Missouri. Its geographical range is from the Antilles to 60° north.

THE WILLET.

TOTANUS SEMIPALMATUS.

PLATE XCVIII. FIG. 219.

(STATE COLLECTION.)

Scolapax semipalmata, GMELIN. *Semipalmated Snipe*. PENNANT, Arct. Zool. Vol. 2, p. 469.
S. id. WILSON, Am. Orn. Vol. 7, p. 27, pl. 56, fig. 3 (summer). *T. crassirostris*, VIEILLOT.
T. (Catoptrophorus) semipalmatus. BONAPARTE, Ann. Lyc. N.Y. Vol. 2, p. 323.
T. id. RICHARDSON, F. B. A. Vol. 2, p. 388, pl. 67 (summer). NUTTALL, Man. Ornith. Vol. 2, p. 145.
T. id. AUDUBON, B. of A. Vol. 5, p. 324, pl. 347. GIRAUD, Birds of Long island, p. 254.

CHARACTERISTICS. Bill straight, solid: fore toes united at the base by a membrane. *Summer*, brown, ash and rufous; beneath whitish, spotted with brown. *Winter*, ashen; beneath white. Length, 15·0.

DESCRIPTION. Bill compressed, tapering, 2·2 long, and equal with the tarsus. Upper mandible curved towards the tip, and bent over the lower one. Nasal furrow deep, and half the length of the bill: nostrils pervious, near the base. Tibia naked half its length nearly; the web between the toes rather largest between the outer and middle toes. Tail moderate, rounded; the two central feathers slightly longest.

COLOR. *Summer:* Bill and feet bluish. Head blackish brown, varied with yellowish or greyish white. Back varied with greenish black, rufous and greyish. Neck grey, striate with brown. Middle tail-feathers white at base, then brown, with five or six dusky angular bars; outer ones whiter, sprinkled with brown. Flanks with a tinge of rufous, and waved with brown bars, pointed in the middle. *Winter*, the spots above not as distinct, and the brown waved bars beneath wanting.

Length, 14·0 – 15·5.

The *Willet*, *Semipalmated Snipe*, or *Stone Curlew*, reaches this State about the beginning of May, and breeds from Louisiana to Massachusetts. The eggs are olive, blotched with reddish brown, particularly towards the larger end. Many remain along the shores of this State to breed, and loiter with us until November. Its food consists of small shellfish, aquatic insects and their larvæ. Its flesh is much esteemed by epicures. Ranges through the interior, and has been observed on the Columbia river, the plains of Missouri, and (according to Dr. Kirtland) in Ohio. Its latitudinal range along the coast is from the 23d to the 56th parallel. Resident in the Southern States in winter. Has been found accidentally in Europe.

(*EXTRA-LIMITAL.*)

T. floridanus, Bonap. (*T. glottis*, Aud. Vol. 5, p. 321, pl. 346.) Bill and feet greenish; the former 2·2 long. Band over the eye, back and beneath white. Scapulars and all above dusky brown, edged with soiled white. Tail dark grey, barred with brown; the two central feathers longest. Length, 11·0. *Florida Keys.*

GENUS LIMOSA. Brisson.

Bill very long, slender, soft and flexible throughout, recurved from the middle; somewhat dilated, flat and obtuse at the point. Both mandibles deeply furrowed throughout nearly their whole length. Legs long and slender. Tibia bare for about a third of its length. Toes four; the anterior connected at base by a membrane; that between the outer and middle largest. Hind toe small, and touching the ground at the tip. Tail short, even.

THE MARLIN.

Limosa fedoa.

PLATE CII. FIG. 228 (Variety).

(STATE COLLECTION.)

Scolopax fedoa, Linnæus, p. 244. *Great Godwit*, Pennant, Arct. Zool. Vol. 2, p. 465; suppl. p. 68.
S. id. Wilson, Am. Orn. Vol. 7, p. 30, pl. 56, fig. 4. *Limosa id.* Vieillot, Ord's reprint.
Limosa id. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 328. Richardson, F. B. A. Vol. 2, p. 395.
L. id. Nuttall, Man. Orn. Vol. 2, p. 173. Audubon, B. of A. Vol. 5, p. 331, pl. 348.
L. id. Giraud, Birds of Long island, p. 259.

Characteristics. Rump uniform in color with the rest. Tail rufous, banded with black: axillaries salmon-colored. *Summer*, dusky brown varied with rufous; beneath pale rusty. *Winter*, ash-colored; beneath whitish. *Male:* breast with waved dusky bars. Length, 17·0.

Description. Bill subcylindrical, recurved, tapering, higher than broad at the base, 4·0 long.

Color. Bill dark brown at the tip, yellowish towards the base: feet bluish. Above dark brown, varied with rufous and grey. Head darker, tinged with reddish and streaked with grey. Scapulars and tertiaries barred on their margins with rufous and grey. Quills blackish

brown ; on the inner webs, buff sprinkled with black. Chin and line from the upper mandible above the eye, white. Beneath pale reddish brown or buff, with small dusky spots on the neck. Upper tail-coverts and tail with many alternate bars of reddish and brown. In the Cabinet of the Lyceum, is a specimen with an unusual variety of plumage, which I have thought proper to figure, rather than the ordinary plumage of this well known species. The breast, belly and flanks with broad and narrow brownish bars ; the ordinary deep buff of the lower parts is here of a faint cream-color : the bill was 4·7 in length.

Length, 16·5 – 19·0.

The female of this species is much larger than the male. It is described in the books as the *Great Marbled Godwit*, a name entirely unknown to the people of the country. With us it is generally called the *Marlin*, and less frequently *Red Curlew*, *Straight-billed Curlew* and *Dough-bird*. Its flesh is tender and much esteemed. They arrive on the coast of this State in May, and the greater part proceed north to breed. They return in large flocks in August, and remain until November, when they proceed to their winter quarters south of the United States. They have been observed by Dr. Kirtland in Ohio. Their geographical range extends from 21 to 68° north. Feed on aquatic insects, leeches, small marine mollusca, crabs and worms.

THE RING-TAILED MARLIN.

Limosa hudsonica.

PLATE CIII. FIG. 230 (Winter).

(CABINET OF THE LYCEUM.)

Hudsonian Godwit. Pennant, Arct. Zool. Suppl. p. 68.
Scolopax hudsonica. Latham, Ind. Orn. Vol. 2, p. 396.
Limasa hudsonica. Richardson, F. B. A. Vol. 2, p. 396,
L. egocephala. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 327. Nuttall, Man. Orn. Vol. 2, p. 175.
L. hudsanica. Audubon, B. of A. Vol. 5, p. 335, pl. 349. Giraud, Birds of Long Island, p. 260.

Characteristics. Rump white. Tail doubly forked, white at base, the black tipped with white : axillaries black. *Summer*, dusky brown varied with reddish ; beneath chesnut, spotted and barred with dusky. *Winter*, ash brown ; beneath on the breast grey ; below whitish. Length, 16·0.

Description. Bill nearly straight, 3·5 long. Color. Above light brown, varied with grey and a few white spots. Line over the eye, and chin, light grey : beneath chesnut. Under wing-coverts black. Under tail-coverts dark brown, barred with rusty ; upper tail-coverts and tail brownish black, white at the base, and narrowly tipped with soiled white. *Female*, beneath dark clay-color. A specimen in the Cabinet of the Lyceum, and which is figured above, presents the following variations from the normal distribution of colors : Bill

3·7, corrugated towards the tip. Tail broadly emarginate; the worn shafts of the middle pair projecting beyond the others. *Color:* Crown brown, obscurely streaked with dusky; back of the neck paler. Back shining olive, with occasional dark spots. Lores dusky; a broad band on the rump, white. Upper tail-coverts beyond this band, black: tail tipped with white; the white on the base of the tail-feathers extends farthest on the outer web of the lateral pair. Beneath, chin and upper part of the throat white; remainder of the throat and upper part of the breast light brownish drab, with a few of the feathers rufous at their tips and bordered with black; remainder of the breast, belly and vent white, with a few rufous marked with zigzag black bars. On the flanks the barred rufous feathers predominate: lateral tail-coverts white, barred, with black. Inner wing-coverts and axillaries white, barred with black.

Length, 15·5 – 16·5.

This is not as common along our coast as the preceding species. In Boston it is called the *Goose-bird.* It appears to breed in high northern latitudes, descending in the spring along the coast as far south as New-York, and probably still farther through the interior. It has been observed in Ohio. I suppose the *L. edwardsi*, or *White Snipe*, noticed by Linsley in his Catalogue of the Birds of Connecticut, to be probably a variety still farther removed, from the ordinary distribution of colors and markings. It is often found associated with the preceding. Its history is incomplete.

GENUS SCOLOPAX. Linnæus.

Bill very long, slender, straight, flexible, soft; the tip depressed and dilated: both mandibles furrowed to the middle; upper terminated by an internal knob, and slightly longer than the lower. Legs moderate or long, slender: four-toed.

Obs. The first described species has been arranged under the genus Macroramphus of Leach, chiefly characterized by the presence of a membrane between the outer and middle membranes extending to the first joint. The others have been arranged under the genus Gallinago, chiefly characterized by its divided feet, and tail of more than twelve feathers. We prefer to retain the old genus Scolopax, which gives its name to the family.

THE DOWITCHEE.

Scolopax noveboracensis.

(STATE COLLECTION.)

Scolopax grisea et *noveboracensis*, Gm. *Brown* and *Red-breasted Snipe.* Pennant, Arct. Zool. Vol. 2, p. 464 (winter and summer).
S. noveboracensis. Wilson, Am. Orn. Vol. 7, p. 45, pl. 58, fig. 1. *S. grisea*, Ord's Reprint, p. 49.
Limosa scolopacea. Say, Long's Exped. Vol. 2, p. 170 (winter).
Totanus noveboracensis. Sabine, Frank. Journey (autumn).
S. (Macroramphus) grisea. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 330. Id. Am. Orn. Vol. 4, p. 51, pl. 23, fig. 3 (winter).
S. noveboracensis, New-York Godwit. Richardson, F. B. A. Vol. 2, p. 398. Nutt. Man. Orn. Vol. 2, p. 181.
S. id., Red-breasted Snipe. Audubon, B. of Am. Vol. 6, p. 10, pl. 351. Giraud, Birds of Long island, p. 263.

Characteristics. Rump and tail white; the former spotted; the latter banded with black: shaft of the first quill white. *Summer*, black, ash and reddish above; beneath reddish. *Winter*, ash-colored above; beneath white. *Young:* neck and breast ash, margined with reddish; beneath white tinged with reddish. Length, 10·0.

Description. Bill straight, compressed for more than half its length, 2·0 long, as long again as the tarsus: inner secondaries much elongated. Tail moderate, nearly even, of twelve feathers.

Color. Bill and feet dark olive. *Spring:* Above brownish black, varied and barred with brownish red; beneath dull chesnut, with distant narrow bars of black. Tail white or light clay-color, barred with black. *Summer*, above dark, obliquely barred with brownish red. 7 – 9 blackish bars across the tail; the tip white. A dull light reddish band round the eye. All beneath orange red, with streaks and spots of black. *Winter*, brownish grey above, barred with dusky; neck ash-grey, streaked with dusky; throat and lower parts white.

Length, 9·5 – 10·5.

The *Dowitchee*, *Red-breasted Snipe*, *Quail Snipe*, or *Brown-back*, arrives on the coast of New-York towards the latter part of April, and, after a few weeks delay, pursues its course northwardly to breed. Its breeding places have not yet been ascertained. About the middle of July, it returns in great numbers to our coast, and is also distributed through the interior to the River Columbia. Its flesh is good, but not as much esteemed as that of the following species. It ranges from 65° north to Mexico. Its history is still incomplete.

THE COMMON AMERICAN SNIPE.

SCOLOPAX WILSONI.

PLATE XCVIII. FIG. 220.

(STATE COLLECTION.)

Scolopax gallinago. WILSON, Am. Orn. Vol. 6, p. 18, pl. 47, fig. 1. *S. brehmii,* KAUP, BONAPARTE, Obs. *S. wilsoni,* TEMMINCK. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 330. RICHARDSON, F. B. A. Vol. 2, p. 401. AUDUBON, B. of Am. Vol. 5, p. 339, pl. 350. NUTTALL, Man. Orn. Vol. 2, p. 185. GIRAUD, Birds of Long island, p. 263.

CHARACTERISTICS. Tail much rounded, of sixteen feathers, with black subterminal bars; outer feathers half as broad as the middle ones. Brown and reddish above; buff on the sides of the head and neck; belly and vent white. Length, 10·0.

DESCRIPTION. Bill straight, compressed from the base, depressed towards the tip, where it is enlarged, and 2·5 long. Second quill longest. Tail much rounded, almost graduated: all the toes cleft to the base.

COLOR. Crown dark-colored, mottled with rufous, and an irregular rufous medial line. Lores, and an oblique streak beneath the eyes, black. On the back, the brownish black feathers are edged with cream-color, and minutely barred with reddish brown. Wings plain dusky; the outer web of the first quill white: outer spurious feather very acute, and margined and tipped with white. Outer tail-feathers dusky white, with four or five brown bars, and tipped (in the male) with pure white; middle feathers jet black at the base, broadly banded with bright bay, margined with black and tipped with yellowish white beneath. Chin brownish white. Throat and breast buff, spotted with brown and grey. Flanks barred with grey and brown, Axillary feathers pure white, with numerous angular brown bars.

Length, 11·0 – 12·0.

The *Common Snipe*, or *English Snipe* as it is ignorantly called from its resemblance to the *S. gallinago* or *Common Snipe* of Europe, reaches this State about the latter end of April or the beginning of March. It breeds from Virginia northwardly, and ranges between the 28th and 55th parallels. It breeds in this State, particularly in wet swampy places. The *Drowned lands*, as they are called, of Orange county, are particularly remarkable as a locality for breeding; but this occurs in every part of the State. The eggs are yellowish, with spots and blotches which form a crowded circle round the larger end. Early in the spring, it soars high in the air, making a booming sound difficult to describe. In Kentucky, and the Southern States, it is a resident during the winter. In this State, it remains with us until winter, or until the ground is so much frozen as to deprive them of their usual food. Its flesh is much esteemed.

(*EXTRA-LIMITAL.*)

S. drummondi. (Rich. F. B. A. Vol. 2, p. 400.) Brownish black above, striped on the neck and back with rufous. Rump and tail-coverts greenish barred with black, tipped with white. Beneath dull brown, with central spots of dark brown. Length, 11·5; bill, 2·5. *Northern regions.*

S. leucurus. (Id. ib. p. 501.) Tail of sixteen feathers; the lateral ones pure white: three basal black bands on the outer web. Belly transversely banded. *Northern regions.*

GENUS RUSTICOLA. Vieillot.

Bill robust, straight, nearly double the length of the tarsus, deeply grooved on each side of the upper mandible, slightly depressed towards the end (which is blunt), and longer than the lower one. Head large. Eyes large. Tibia entirely feathered: legs short. Toes cleft to the base. Hind nail obtuse, not projecting beyond the claw. Wings short; the first three quills very narrow; the fourth and fifth longest, subequal.

Obs. This group, which was first separated from Scolopax by Vieillot, and subsequently by Nuttall under the name of Microptera, differs essentially from any of the species belonging to the first named genus. It contains at present but one American authenticated species.

THE AMERICAN WOODCOCK.

Rusticola minor.

PLATE CIII. FIG. 231.

(STATE COLLECTION.)

Scolopax minor, Gmelin. *Little Woodcock*, Pennant, Arct. Zool. Vol. 2, p. 463, pl. 19.
S. id. Wilson, Am. Orn. Vol. 6, p. 40, pl. 48, fig. 2.
S. (Rusticola) id. Bonaparte, Ann. Lyc. Vol. 2, p. 331.
S. id. Audubon, Birds of Am. Vol. 6, p. 15, pl. 352. Nuttall, Man. Orn. Vol. 2, p. 195. Giraud, Birds of Long island, p. 269.

Characteristics. Hind head black, with three narrow pale rufous bars; beneath pale buff or chesnut, not barred. Quills plain brown. Length, 11·0.

Description. Bill straight, knobbed and slightly drooping at the tip, 2·9 long. Feathers of the flanks loosely webbed. Tail short, wedge-shaped. Eyes large, and near the summit of the head.

Color. Fore part of the head brownish ash; all above black, varied with reddish and grey. Wing-coverts rufous, barred obscurely with brown. Tail above black, bordered narrowly

with chesnut, and broadly tipped with brown. A narrow interrupted line of black extends from the base of the bill to the eye. Beneath, the chin and sides of the face bluish grey. Middle of the abdomen pale rufous; flanks of a deeper color: axillaries salmon-colored.

Length, 10·5 – 11·5.

This well known and highly prized bird appears in this State from the south early in March, and remains with us until January, although many pass on to higher latitudes. My venerable friend Mr. I. Cozzens informs me, that as late as 1814, it was abundant in many places on the island of Manhattan, which are now entirely covered with houses. It breeds in every part of the State; the eggs are usually four in number, dull yellowish irregularly blotched with reddish brown. Its food consists chiefly of earth-worms and aquatic insects. In some parts of the State, it is known under the name of *Blind Snipe;* but for what reason, I have not been able to discover. It habitually inhabits swamps and miry places, but in wet seasons it may be found on high grounds. It resembles considerably the European Woodcock, but is smaller, and the lower parts are plain, without the black bars. It is unfortunately one of the very few birds protected by law: they are not allowed to be exposed for sale until after the first of July. Distributed through the interior, and ranges from 26° to 52° north latitude. A winter resident in the Southern States.

FAMILY RALLIDÆ.

Bill short or moderate, hard, thick at the base, curved at the point; in some, very stout and much compressed. Head small. Body slender, much compressed. Legs moderate; a small portion of the tibia naked. Toes four, very long, divided, edged by a membrane. Third or fourth quill longest. Tail short, of twelve feathers.

Obs. This family, which corresponds with the *Macrodactyli* of Vieillot, Cuvier and others, comprises about sixty species, distributed over the globe. Of these, ten are known in North America, and seven are found in this State.

GENUS RALLUS. Linnæus. Illiger.

Bill longer than the head, slender, nearly straight, subequal throughout, compressed at the base, cylindrical and obtuse at the point: upper mandible furrowed beyond the middle. Nostrils sub-basal, linear. Tail short, somewhat pointed, upturned, concealed beneath the tail-coverts.

THE SALTWATER MEADOW-HEN.

Rallus crepitans.

PLATE XCIX. FIG. 222.

(STATE COLLECTION.)

Rallus crepitans, Gm. Wilson, Am. Orn. Vol. 7, p. 112.
Clapper Rail. Nuttall, Man. Orn. Vol. 2, p. 201.
R. crepitans. Audubon, B. of A. Vol. 5, p. 165, pl. 310. Giraud, Birds of Long island, p. 206.

Characteristics. Bluish grey, margined with olive-brown; beneath rufous or ash. Wing-coverts and quills brown. *Young*, ash; beneath whitish. Length, 14·0.

Description. Bill compressed, acute at tip, slightly curved from the middle, 2·2 long measured from above; the upper mandible at the base almost continuous with the outline of the head: a slight notch near the tip. The first and eighth quills nearly equal in length. Tarsus 1·8 long; naked space on the tibia 0·5. Tail rounded, with rather acuminate feathers.

Color. Above brownish, intermixed with ash and rufous. Quills plain rufous brown: ridge of the wings white. Sides of the face varying from slate to dark olive-green: line over and around the eye, chin, and upper part of the throat white or dull grey. Sides of the neck tinged with reddish; breast rufous and grey. Axillaries, under wing-coverts, flanks, thighs and lateral lower tail-coverts olive-brown barred with white. Bill and feet yellowish brown.

Length, 13·5 – 15·0.

The *Clapper Rail*, *Mud-hen*, or *Meadow-hen*, appears along the shores of this State about the latter end of April, and, after raising its brood, departs for the South in October. It lays from 8 – 15 dull whitish eggs, sparingly spotted with reddish brown towards the larger end. These eggs are highly prized, and are sought for with great avidity. The Mud-hen is very abundant during the season, and, according to Mr. Linsley, breeds extensively along the shores of Connecticut. They are not found in the interior, and are winter residents from Carolina southwardly. Its hitherto ascertained geographical range is from 24° to 41°·10 north.

Two very distinct species have been for a long time given by Wilson under the name of *crepitans*. In his *Ornithology*, he has given a faithful description of this species, but his plate represents another. We are indebted to Messrs. Bachman and Audubon for having pointed out the differences between them.

THE FRESHWATER MEADOW-HEN.

RALLUS ELEGANS.

PLATE XCIX. FIG. 221.

(CABINET OF W. COOPER.)

Clapper Rail. WILSON, Am. Orn. Vol. 7, pl. 62, fig. 2.
Great Red-breasted Rail, or *Freshwater Marsh-hen, R. elegans.* AUDUBON, B. of A. Vol. 5, p. 160, pl. 309.
R. elegans. LINSLEY, Cab. Birds of Conn. p. 19. GIRAUD, Birds of Long island, p. 209.

CHARACTERISTICS. Blackish varied with rufous; beneath bright bay or dull chesnut. Wing-coverts bright chesnut. Quills deep brownish black. Length, 18·0.

DESCRIPTION. Bill somewhat more robust than the preceding, compressed, very slightly curved, 2·6 long; the upper mandible notched at the tip. The naked shafts of the feathers on the forehead and crown black, polished, and more conspicuous. The first and seventh quills subequal; the shafts sinuous. Spur on the ridge of the wing prominent, incurved. Naked space of tibia 0·8; tarsus 2·4.

COLOR. Above blackish or deep olive; the feathers edged with rufous. Ridge of the wing white. Summit of the head brownish black. A grey line passes from the base of the upper mandible, above the eye, and round it, becoming effaced behind the eye; beneath the eye, ash-grey, bordered by the rufous color of the sides of the neck. Chin and upper part of the throat white; lower part of the neck, with the breast, bright chesnut. Flanks, axillaries, thighs, and lateral under tail-coverts blackish brown barred with white.

Length, 17·0 – 19·0.

This species is very rare, or at least has not often been observed in this State. Mr. Linsley found it in Connecticut, and is inclined to think that it even breeds there. He describes the eggs as larger and darker than those of the preceding species. Unlike the preceding, it is only found in swamps and meadows, and along freshwater streams. Its shy and retired habits may probably account for the very few that have been observed. Its utmost geographical range, that has been hitherto observed, is from 28° to 41° north latitude; but it is most abundant from Carolina southwardly. Its history is incomplete.

THE MUD-HEN.

RALLUS VIRGINIANUS.

PLATE C. FIG. 223.

(STATE COLLECTION.)

Rallus virginianus, LIN. GMELIN, Vol. 1, p. 716.
R. pensylvanicus. BRISSON, Av. p. 138.
R limicola, VIEILLOT. *R. virginianus*, WILSON, Am. Ornithology, Vol. 7, p. 109, pl. 62, fig. 2.
R. virginianus. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 334. NUTTALL, Man. Orn. Vol. 2, p. 205. AUDUBON, Birds of Am. Vol. 5, p. 174, pl. 311. GIRAUD, Birds of Long island, p. 208.

CHARACTERISTICS. Black, skirted with brown; beneath rufous. Throat white. Wing-coverts chesnut; first quill entirely black. Length, 10·0.

DESCRIPTION. Bill deep at the base, slightly curved, slender, compressed, 1·7 long. The first and sixth quills subequal. Tarsus 1·3 long, compressed. Feathers of the forehead with the shaft elongated beyond the web.

COLOR. Deep brownish black above; the feathers streaked with olive brown. A whitish line extending from the base of the bill over the eye; lores and space behind the eye bluish grey. Wings blackish brown; the coverts reddish brown or chesnut. Throat white; neck and breast reddish brown. Vent and under tail-coverts dusky brown, barred with white; feathers of the tibia lightest in front.

Length, 9·5 – 10·5.

This little Mud-hen, or *Virginian Rail*, is found throughout the State. The eggs are dusky white, with brownish specks chiefly about the largest end. It occurs with us from May to September, living chiefly along the course of fresh water streams and morasses, but has also been observed along the coast. Feeds on worms, aquatic insects, freshwater shells, and the seeds of grasses. It ranges from 24° to 58° north latitude, and is a winter resident from Carolina southwardly.

GENUS ORTYGOMETRA. ALDROVANDUS. LEACH.

With most of the characters of the preceding genus. Bill shorter than the head, compressed, tapering, acute at the point, much higher than wide at the base. Upper mandible furrowed at the base only, slightly curved at the tip. Nostrils medial, linear.

OBS. This corresponds with the genus CREX of Illiger, Bechstein and Bonaparte, and embraces two small species in this State.

THE SORA RAIL.

ORTYGOMETRA CAROLINA.

PLATE C. FIG. 224.

(STATE COLLECTION.)

Rallus carolinus, LIN. p. 263. *Soree gallinule*, PENNANT, Arctic Zoology, Vol. 2, p. 491.
R. virginianus. WILSON, (misprint) Am. Orn. Vol. 6, p. 27, pl. 48, fig. 1; *carolinus* in the Index.
R. stolidus, VIEILLOT. *R. (Crex) carolinus*, BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 334.
R. carolinus. NUTTALL, Man. Orn. Vol. 2, p. 209. AUDUBON, Birds of Am. Vol. 5, p. 145, pl. 306. GIRAUD, Birds of Long Island, p. 201.

CHARACTERISTICS. Olive brown and black. Feathers with white margins. Breast and flanks mostly slate; the latter waved with white. Edge of first quill white. *Male*, centre of the throat black. *Female* and *young*, throat white, or obscurely barred. Length, 9·0.

DESCRIPTION. Bill straight, compressed, 0·8 long and 0·3 deep at the base: upper mandible slightly notched at the tip. First and fifth quills subequal; the second longest. Nails compressed, straight. Tail almost pointed.

COLOR. Bill yellow, dusky towards the tip. Lores, centre of the crown, (and stripe down the throat in the male,) black. Line over the eye, cheeks and breast bluish ash. Above olive brown; the centre of the feathers dark brown, and the margins bordered with white. Tail dusky brown, darker in the centre. Beneath with obscure light bars on the breast: centre of the abdomen whitish. Sides, flanks and axillaries dark, with angular bars of white. *Female* and *young:* Breast reddish brown; throat white or obscurely barred; chin and abdomen greyish white; the dark medial line on the crown sometimes scarcely apparent. Above, the bright reddish tint is more apparent, and the white margins of the feathers are interrupted, forming white spots.

Length, 8·5 – 9·5.

The *Sora* or *Soree*, *English Rail* or *Coot* of the Southern States, although numerous in the adjoining State of New-Jersey, where it is much sought after as game, appears but sparingly within our borders. It nevertheless breeds in this State. It occurs in fresh and salt-water marshes; appearing with us in the spring, and disappearing with the first frost. Its presumed geographical range extends from the 25th to the 62d parallel. A winter resident of Florida and Louisiana. Its history is yet incomplete.

THE NEW-YORK RAIL.

ORTYGOMETRA NOVEBORACENSIS.

PLATE CI. FIG. 225.

(CABINET OF THE LYCEUM.)

Fulica noveboracensis, GMELIN. *Yellow-breasted Gallinule*, PENNANT, Arct. Zool. Vol. 2, p. 491.
Rallus ruficollis. VIEILLOT, Gal. Ois. de l'Am. Vol. 2, pl. 266.
R. (Crex) noveboracensis. BONAPARTE, Ann. Lyc. Vol. 2, p. 335.
Yellow-breasted Rail. ID. Am. Orn. Vol. 4, p. 136, pl. 27, fig. 2 (young?). RICHARDSON, F. B. A. Vol. 2, p. 402. AUDUBON, B. of A. Vol. 5, p. 152, pl. 307. NUTTALL, Man. Orn. Vol. 2, p. 215. GIRAUD, Birds of Long island, p. 204.

CHARACTERISTICS. Black, varied with rusty, and with numerous narrow transverse white bars: beneath bright reddish brown, with dusky bars. *Female* and *young*, duller; the legs lineated. Length, 5·5.

DESCRIPTION. Bill short, robust, compressed, 0·6 long: edge of the lower mandible entire. Tarsus 0·9: middle toe and nail 1·2. The naked space of the tibia very small, and covered by the feathers to the joint. Hind nail much incurved; the others straight. Second quill longest. Tail compressed. Spur on the wing inconspicuous or absent.

COLOR. Above, the crown dusky, faintly streaked with rufous. Feathers on the upper parts dark brown in their centres, light chesnut on their borders, and crossed with one or two narrow white bars, one of them subterminal: these bars appear on the scapulars, tertials, lateral tail-coverts and flanks. Quills plain olive-brown. Lores and auriculars dusky brown. Line over the eye, and sides of the neck cinnamon-brown. Chin rufous white. Throat and breast bright reddish brown, with obscure dusky bars on the sides. Thigh-feathers blackish.

Length, 5·0 – 6·0.

This diminutive Rail has been so little observed, that it has received no popular name. It is distributed through the United States in the interior to the Rocky mountains, and along the seaboard. It ranges from Louisiana to Hudson's Bay, breeding in most of the intermediate places. The eggs are pure white, and vary in number from ten to sixteen. Its general resemblance to the European Quail is such that Latham describes it under the name of *Hudsonian Quail*. Its food consists of aquatic insects and seeds. It is a shy solitary bird, never appearing in flocks like the preceding species.

(*EXTRA-LIMITAL.*)

O. jamaicensis, BRISS. (AUD. B. of A. Vol. 5, p. 157, pl. 308.) Black: hind part of the back barred with white. Beneath, hinder parts and thighs barred with black. Bill black. Legs yellowish green. Length, 6·0. *New-Jersey to Louisiana.*

Genus ARAMUS, *Vieillot*. Bill much longer than the head, compressed, curved, and somewhat turgid at the tip. Upper mandible slightly furrowed; lower, turgid about the middle. Nostrils wide, linear, pervious. Head wholly feathered. Lores naked. Naked space on the tibia

extensive. Third quill longest. Hind toe bearing on the ground with several joints. Toes entirely divided.

A. scolopaceus, Vieill. (Bon. Am. Orn. Vol. 4, pl. 26. Aud. B. of A. Vol. 5, p. 181, pl. 312.) Brown, glossed with green. Feathers of the head and neck longitudinally marked in their centres with white. Rump, quills and tail chocolate-brown, unspotted. Length, 24·0. *Florida and Tropical America. Accidental in New-Jersey.*

GENUS GALLINULA. Brisson.

Bill shorter than the head, straight, compressed, convex above: base of the upper mandible spreading out into a naked space advancing on the forehead. Nostrils lateral, medial, oblong-linear. Toes four; the anterior very long and cleft to the base, bordered by a narrow entire membrane. First quill shorter than the fifth; second and third longest.

THE FLORIDA GALLINULE.

Gallinula galeata.

PLATE CV. FIG. 234.

(COLLECTION OF H. C. DE RHAM.)

Gallinula chloropus. Bonaparte, Am. Orn. Vol. 4, p. 128, pl. 27, fig. 1 (adult).
G. galeata, Lichtenstein. Temminck, Vol. 2, p. 696 (note). Bonaparte, Geog. and Comp. List, p. 53.
G. chloropus. Audubon, B. of A. Vol. 5, p. 132, pl. 304. Giraud, Birds of Long island, p. 197.

Characteristics. Frontal cere very long, quadrate. Middle toe 2·8. A red circle round the tibia. Central under tail-coverts brown. *Adult*, dark reddish brown. *Young*, brownish olive; beneath whitish. Length, 14·0.

Description. General color dark sooty brown. Head and neck darker: shoulder and external edge of the wing white. Beneath bluish ash. Lateral under tail-coverts pure white: shafts of the quills black; outer web of the first quill white. Bill and naked space on the forehead red; the former yellow towards the tip. *Young:* chin and upper part of the throat white, mottled below with dusky. Length, 14·0.

This is a rare visitor from the South to our shores. It has hitherto been confounded with the *chloropus* of Europe, to which it is closely allied. It ranges from Mexico to Massachusetts, and is a winter resident from Carolina southwardly. It has been observed in Ohio.

(*EXTRA-LIMITAL*)

G. martinica, Gm. (Aud. B. of A. Vol. 5, p. 128, pl. 303.) Lower wing-coverts blue. All the under tail-coverts pure white. No colored circle round the tibia. *Adult*, purple; back and tail green; sides of the neck and wings blue. *Young*, varied with dull purplish and dusky; beneath with black and white. Length, 13·0. *Mexico to Carolina. Accidental in Massachusetts.*

FAMILY RECURVIROSTRIDÆ.

Neck, bill and feet much elongated. The bill twice the length of the head, more or less recurved from the tip. Nostrils in the furrow, basal, linear, pervious. Toes three or four. Hind toe, when present, very short, articulated high up, and not touching the ground. Anterior toes connected by a web more or less extensive. Tibia mostly naked. Tail short, of twelve feathers. Wings long and pointed.

Obs. This family comprises about seven species, whose anomalous forms render it difficult to arrange in a natural series. In some respects they are closely allied to some of the genera of the family *Scolopacidæ*, whilst in others they appear to form a natural passage between this and the following order.

GENUS HIMANTOPUS. Brisson.

Bill much longer than the head, very slender, smooth, cylindrical, tapering and slightly recurved from the middle, not as long as the tarsus. Mandibles channelled laterally for half their length. Legs unusually long and slender. Tibia very long and almost entirely naked. Toes three; the outer and middle connected by a broad membrane: a smaller membrane between the middle and inner toe.

THE LAWYER.

Himantopus nigricollis.

PLATE LXXXVIII. FIG. 200.

(CABINET OF THE LYCEUM.)

Recurvirostra himantopus. Wilson, Am. Orn. Vol. 7, p. 48, pl. 58, fig. 2.
Himantopus mexicanus, Ord's reprint, p. 52. *H. nigricollis*, Vieillot. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 322. Nuttall, Man. Orn. Vol. 2, p. 8.
H. id., Black-necked Stilt. Audubon, B. of A. Vol. 6, p. 31, pl. 354. Giraud, Birds of Long island, p. 270.

Characteristics. White. Head, neck, back and wings above, black. Length, 14 inches.

Description. Bill slender, slightly upturned, 3·0 long, and drooping at the tip. Tibia bare for more than half its length, and, together with the tarsus, 7·5 long.

Color. Forehead, spot over and round the eye, cheeks, sides of the neck and all beneath white. Line before and round the eye, crown, back of the neck, scapulars and wings above greenish black. The stripe on the back of the neck dilated near its junction with the body. Bill black. Feet red. *Female* and *young*, dark brown above.

Length, 13·5 – 14·5.

This is not a very common visitor to our shores. It is known under the various popular names of *Tilt*, *Stilt*, *Longshanks* and *Lawyer*. The origin of this last popular name (which is most in use), I have not been able to discover : there appears to be nothing unusual in the length of its *bill*. It ranges from the equator to the 41st degree of north latitude, its extreme northern range terminating in this State. It breeds in the adjacent State of New-Jersey, and possibly here, although I have no positive evidence on the subject. The eggs are yellowish, blotched and lined with black. It is a shore bird, living upon small fishes, crabs, insects and worms. Many are winter residents in Florida and Louisiana. It appears every where to be a rare species.

GENUS RECURVIROSTRA. Linnæus.

Bill long, very slender, depressed, turned upwards from the middle to the tip, and much longer than the tarsus. Mandibles subequal, and furrowed on each side at the base. Hind toe very short, articulated high up, and not touching the ground. Anterior toes webbed to the second joint.

THE AMERICAN AVOSET.

Recurvirostra americana.

PLATE CII. FIGS. 227, 229 (Summer and winter).

(STATE COLLECTION. CABINET OF THE LYCEUM.)

Recurvirostra americana. Linnæus, Syst. Nat. p. 256.
American Avoset. Pennant, Arct. Zool. Vol. 2, p. 502.
R. id. Leach, Zool. Misc. Vol. 3, p. 113, pl. 101. Wilson, Am. Orn. Vol. 7, p. 126, pl. 63, fig. 2.
R. id. Rich. F. B. A. Vol. 2, p. 315. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 345.
R. id. Audubon, B. of A. Vol. 6, p. 24, pl. 353. Giraud, Birds of Long island, p. 269.

Characteristics. White : tail tinged with pale ash; back and wings black. *Summer :* Head and neck pale rufous. *Winter*, these parts white. Length, 18·0.

Description. Bill slender, flattened, tapering to a delicate point, recurved, longer than the tarsus. Upper mandible turned down at the tip. Tibia half naked. Tarsus compressed, 3·7 long.

Color. *Summer* and *autumn :* Head, neck and breast light reddish buff, deeper on the back of the neck. Face, space round the eye, ridge of the wings, outer scapulars, tips of the greater coverts, inner webs and outer margins of the secondaries, back, abdomen, vent and thighs white. Interior scapulars, coverts and quills brownish black. Upper tail-coverts dark at their base. Bill black. Legs blue. In this State it is represented by figure 229. In the Cabinet of the Lyceum is a specimen labelled "*Male Avoset*, shot October 29, on

Long island," which I was at first disposed to regard either as new or identical with the *R. avocetta* of Europe. It, however, resembles that just described, in dimensions and in the distribution of the markings, but the colors themselves are different. Instead of the reddish head, neck and breast, these are in some lights apparently white, but, upon a careful examination, are found to be of a light ash-grey. Supposing it to be the winter plumage, and in this state not hitherto described, I have figured it at 227. This is possibly the *White Avoset* of Nuttall, taken on the Missouri.

Length, 18·0 – 19·0.

The *American Avoset*, or *Blue-stocking* as it is called in New-Jersey, is a scarce bird on the shores of this State. It breeds in New-Jersey, and probably in this State, which it reaches in May, and occurs sparingly until November. It ranges from the tropics to the 68th parallel, and is abundant in the fur countries, appearing through Ohio, Indiana (where it breeds), and Missouri to the Rocky mountains. The eggs are dull olive, with large blotches of dark brown. Its food varies with its place of resort, consisting of insects, crabs, fishes, marine worms, paludinas and other shells.

FAMILY PHALAROPODIDÆ.

Bill moderate, straight: both mandibles furrowed to their base; upper one somewhat curved at the point. Nostrils in the furrow, basal, half covered by a membrane, oval or linear. Feet moderate, four-toed. Tibia partly naked. Toes four, moderate, slender, bordered by a lobed membrane; the outer connected at the base to the middle one by a membrane. Wings long and pointed. Tail moderate or short.

Obs. This family, forming the *Hygrobatæ*, *Pinnatipedes*, *Phalaropodidæ* and *Lobipedes* of Bonaparte, Illiger and others, forms a natural passage to the next order. It comprises at present not more than three specific forms, but varies so much with sex and season as to have given rise to many more nominal species.

GENUS PHALAROPUS. Cuvier. Bonaparte.

Bill moderate, robust, much depressed throughout, trigonal at base, dilated towards the pointed extremity. Nostrils basal, oval, surrounded by a membrane. Tarsi short and stout, scarcely compressed. Middle toe united with the outer by a membrane, to the second, and with the inner to the first joint. Hind toe short, scarcely touching the ground. Tail rather long.

THE RED PHALAROPE.

PHALAROPUS FULICARIUS.

PLATE CIV. FIG. 232.

(STATE COLLECTION.)

Tringa fulicaria. PENNANT, Arct. Zool. Vol. 2, p. 491.
P. hyperboreus. WILSON, Am. Orn. Vol. 9, p. 75, pl. 73, fig. 4.
P. platyrhincus. TEMMINCK, Orn. Vol. 2, p. 712.
P. fulicarius. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 341. NUTT. Man. Orn. Vol. 2, p. 236. RICHARDSON, F. B. A. Vol. 2, p. 407. AUDUBON, Birds of Am. Vol. 5, p. 291, pl. 339. GIRAUD, Birds of Long island, p. 245.

CHARACTERISTICS. Blackish varied with rufous; beneath rufous. *Winter*, ash; beneath white. Length, 7·0.

DESCRIPTION. Bill straight, much depressed and enlarged towards the tip, which is tapering, acute, and turned down over the lower mandible; measured from above, 1·0 long. Tarsus 0·9.

COLOR, of a female in the summer plumage: Head and hind head blackish, with a few obscure whitish spots. Back black, bordered with rufous. Some of the scapulars jet black, with a distinct rufous border. Wing-coverts dusky brown, tipped with white, forming an oblique band across the wings. Rump white, covered with reddish. A greyish line over the eye; and on the side of the head beneath the eye, greyish. Stripe passing through the eye, dusky. Chin and middle of the abdomen soiled white; the former minutely mottled with ashy brown. Neck and sides of the neck extending nearly around it, breast, flanks, vent and under tail-coverts dull chesnut-red. Under wing-coverts white tinged with yellowish red. In winter, the summit of the head, occiput and nape said to be pure ash. Front, sides of the neck, middle of the breast and all other parts beneath pure white. *Young*, semilunar patch of black on the occiput, and a band of the same color over the eyes; quills fringed with white. Mr. Girand describes a specimen shot in the autumn, as follows: "Forehead, throat, a line behind the eye, fore part of the breast, abdomen and lower tail-coverts white; fore neck pale brown; a line beneath the eye extending the whole length of the head, crown, fore part of the back, tertials, wings, rump, upper tail-coverts and tail blackish brown, the feathers edged with dull yellowish; middle of the back and sides of the upper part of the breast greyish blue; flanks streaked with the same; bill black; legs and feet yellowish."

Length, 7·0 – 8·0.

This little arctic species is common to the north of both continents. It appears sparingly on our coast in June, and disappears in September. It breeds only in high northern latitudes. Has been seen in Kentucky. Supposed to extend its winter migration to Mexico.

GENUS LOBIPES. Cuvier. Bonaparte.

Bill moderate, slender, subulate to its acute tip. Upper mandible slightly curved upon the lower at the tip. Nostrils sub-basal, linear. Tarsus elongated. Membranous margin of the toes broad and deeply scolloped, connected by webs at the base. Hind toe short. Tail short.

THE HYPERBOREAN LOBEFOOT.

Lobipes hyperboreus.

PLATE XC. FIGS. 203, 204.

(STATE COLLECTION. Cabinet of the Lyceum.)

Tringa hyperborea. Lin. p. 249.
Lobipes id. Cuv. Richardson, F. B. A. Vol. 2, p. 406.
P. (Lobipes) hyperboreus. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 312.
Lobipes id. Id. Geog. and Comp. List.
P. id. Bonaparte, Am. Orn. Vol. 4, p. 82, pl. 25, fig. 2. Nuttall, Man. Orn. Vol. 2, p. 239.
Hyperborean Phalarope, Lobipes id. Audubon, Birds of Am. Vol. 5, p. 295, pl. 340.

Characteristics. Black varied with rufous; beneath white; sides of the neck and breast bright rufous and ash. *Winter*, cinereous; beneath white. *Young*, brownish varied with rusty; front and beneath white. Length, 7·0.

Description. Bill very slender, acute, turned down at the tip, 0·9 long. Tarsus 0·7: tibia bare for some distance above the joint. Tail short, much rounded.

Color. *Winter plumage* (fig. 204): Front, sides of the neck, chin, throat and all beneath white; summit of the head, a patch behind the eye, and all above blackish varied with slate, rufous and grey. In a *male in change*, in the State Collection, from Long island (fig. 203): Breast ash-grey; a spot before the eye, and the lower eyelid white; a tinge of deep rufous on the sides of the neck, and over the upper plumage; upper tail-coverts barred with rufous and black, and tipped with white. *Adult female in spring:* Sides and front of the neck bright orange; front, crown, sides of the head and back slate; scapulars and interscapulars ashy brown varied with yellowish rufous, and minutely tipped with white; wing-coverts and quills dusky, the former broadly tipped with white, so as to form an oblique band across the wings; breast grey, tinged with rufous; chin, sides of the neck and all beneath pure white; sides of the breast mottled with ash; lateral tail-feathers white, bordered with dusky.

Length, 6·5–7·5.

This is an exceedingly rare species in this State, or at least has been little noticed. It occurs abundantly in Maine (where they are termed *Sea Geese*), and farther north. Its present ascertained geographical range is from the 19th to the 75th parallels. Has not been observed in the interior. Common to the northern regions of both continents. The history of its migrations not yet fully developed.

GENUS HOLOPODIUS. Bonaparte.

Bill long, very slender, flexible, cylindrical and of equal breadth throughout; the point narrow and slightly curved. Nostrils basal, long and linear; the grooves nearly obsolete. Tarsus long, acutely compressed. Toes elongated; the hind toe long, and resting on the ground. A slight web between the middle and outer toes to the first joint, scarcely perceptible between the middle and inner toe. Edging membrane of the toes narrow, and almost wholly entire.

WILSON'S HOLOPODE.

Holopodius wilsoni.

PLATE LXXXIX. FIGS. 201, 202.

(STATE COLLECTION. Cabinet of G. N. Lawrence.)

Phalaropus lobatus, Wilson. Ord, Vol. 9, pp. 72, 232, pl. 73, fig. 2.
P. wilsoni. Sabine, Franklin's Exped.
P. (Holopodius) wilsoni. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 342. Richardson, F. B. A. Vol. 2, p. 405, pl. 69 (summer). Bonaparte, Am. Ornith. Vol. 4, p. 59, pl. 24, fig. 1 (adult); pl. 25, fig. 1 (young). Audubon, Birds of Am. Vol. 5, p. 299, pl. 341 (male and female). Giraud, Birds of Long island, p. 246.

Characteristics. Bluish grey; beneath white. A long chesnut stripe on the sides of the neck, confluent on the back; and a black curving band through the eye on each side of the neck. *Female* and *young*, dusky brown; beneath white. Sides of the neck tinged with rufous, but without the dark band. Length, 10·0.

Description. Tibia 0·7 in its naked part: bill 1·3. Membrane lining the toes continuous, not lobed.

Color. Crown of the head and lores ash-grey. Above brown. A streak over the eye, the chin, sides of the rump, tips and edges of the lateral tail-feathers, and all beneath white. A black band passes through the eyes, becomes dilated, and ends on the sides of the neck. *Young* or *male in change*, in the State Collection (fig. 202), present some differences from that described by Bonaparte (op. cit.). The crown darker, mixed with rufous; frontlet, sides of the head, chin, throat and all beneath soiled white; back of the neck ash-grey; above black varied with rufous; rump white; central tail-feathers brownish, bordered with white;

lateral tail-feathers light brown on their outer webs, mottled with brown on their white inner vanes, and both bordered with white; sides of the body and flanks slightly tinged with rufous. *Adult male*, killed at Moriches, Long island, June 1 (fig. 201): Crown and lores ashen grey; chin, sides of the neck, occipital stripe, flanks, abdomen and under side of the tail white; a black band passes through the eyes on each side of the neck, and terminates in a dilated dark chocolate-brown spot over the shoulders; upper part of the foreneck light rufous brown; back slate-grey varied with chesnut-brown. *Communicated by Mr. G. N. Lawrence.*

Length, 9·5 – 10·5.

This little species is also very rare in the State of New-York. They have, however, been found near Buffalo, and on Long island. Breeds abundantly in high latitudes, in New-Jersey, and probably in this State. Ranges across the continent to the Rocky mountains. Its geographical limits, now known, extend from Mexico to 55° north.

(*EXTRA-LIMITAL.*)

H. glacialis. (Rich. F. B. A. Vol. 2, p. 409.) Bill slender, dilated at the end; crown dusky and dull yellow; cheeks and fore part of the neck yellowish; legs yellowish. An *var. præced.? Northern Regions.*

ORDER V. LOBIPEDES.

Bill robust, straight, compressed; the upper mandible straight or curved at the point. Feet moderate. Tarsus short. Toes four, all broadly margined with a membrane. Essentially aquatic.

Obs. This highly artificial order comprises a few water-birds, which can scarcely retain their places among the Grallæ, and form an easy transition to the succeeding order.

FAMILY PODICIPIDÆ.

Bill robust, higher than broad at the base; the upper mandible straight or curved at the point. Feet moderate, placed far back. Tarsus short, compressed. Hind toe articulated high up and internally on the tarsus. Tail short or entirely wanting.

GENUS FULICA. Gmelin.

Bill about the length of the head, robust, curved at the point, much compressed, conical, very high at the base, which spreads out into a naked disk on the forehead. Nostrils medial, pervious, oblong, somewhat oblique. Toes four, with a scolloped membrane. Middle toe longer than the tarsus. Tibia partially naked Second and third quills longest. Tail short, of 12 – 14 feathers.

THE AMERICAN COOT.

Fulica americana.

PLATE CIV. FIG. 233.

(STATE COLLECTION.)

Fulica americana, Gmelin. *F. floridana*, Bartram, p. 296.
F. atra. Wilson, Am. Orn. Vol. 9, p. 61, pl. 73, fig. 1.
F. americana. Say, Long's Expedition. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 338. Richardson, F. B. A. Vol. 2, p. 404. Nut. Man. Orn. Vol. 2, p. 229. Audubon, Birds of Am. Vol. 5, p. 138, pl. 395. Leib, Ac. Sc. Vol. 8, p. 203. Giraud, Birds of Long island, p. 200.

Characteristics. Dark slate: under tail-coverts and exterior lining of the wings white. Tail of 14 feathers. *Adult:* head and neck deep black; membrane on the forehead white. *Female*, greyish beneath. *Young*, head and neck brownish black; beneath paler. Length, 14·0.

Description. Bill 1·2, or about half the length of the tarsus, with a slight notch at the tip of the upper mandible. Tail short, subacute.

Color. Back, scapulars, rump and tail-coverts brown, tinged with green. Head and neck jet black. Quills brown, occasionally tipped with white: first quill white on its outer web; tips of the secondaries, ridge of the wing and under tail-coverts white. Legs yellowish green. Bill greyish, tipped with dusky. Naked space on the head white, changing to reddish after death.

Length, 13·5–16·0.

This bird, which has also received the popular names of *Mud-hen*, *White-bill* and *Hen-bill*, is found in this State from the latter part of March to the middle of November. According to Mr. Leib, it breeds in June on the borders of Lake Erie, Michigan. It lays 10–15 oval greenish yellow eggs sprinkled with small dark brown spots. It frequents low marshy spots near the coast, and swims with great ease on the water. It ranges from Mexico to the 56th parallel, breeding from Massachusetts and probably from this State northwardly. Resident during winter in Florida and Louisiana, and extends to Columbia river.

GENUS PODICEPS. Latham.

Bill moderate, straight, robust, moderately compressed, hard, pointed. Nostrils basal, pervious, oblong, posteriorly half closed by a membrane. Neck long and slender. Feet placed very far back. Tibia short, feathered to the joint, almost hidden in the belly. Inner and middle toes connected by a web to the first joint. Tarsus much compressed. Claws flattened. Tail none; in its place a tuft of downy feathers. Wings short.

THE HORNED GREBE.

PODICEPS CORNUTUS.

PLATE CXL. FIG. 305 (IMMATURE).

(STATE COLLECTION.)

Colymbus cornutus, GMELIN. *Podiceps id.* LATHAM.
Horned Grebe. PENNANT, Arct. Zool. Vol. 2, p. 247. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 417.
Horned Grebe, or *Dobchick.* NUTTALL, Man. Orn. Vol. 2, p. 254. GIRAUD, Birds of Long island, p. 281.
P. cornutus. AUDUBON, B. of Am. Vol. 7, p. 316, pl. 481.

CHARACTERISTICS. Bill shorter than the head, compressed throughout. Secondaries white; 12 outer quills entirely brown. *Adult*, dusky; beneath white; a tuft of rufous feathers above and beneath each eye; neck and breast rufous: a broad black ruff round the neck. *Young*, pure white beneath, except the neck; the white nearly meeting on the nape: no ornamental tufts. Length, 15·0.

DESCRIPTION. Bill straight, uniformly attenuated to the straight tip, 1·0 long. Crest and ruff as noted in the specific phrase. In the young, the crest is apparent, but not conspicuous, and the place of the ruff is marked by somewhat longer feathers. Tarsus 1·7, much compressed, serrate behind, smoother in front: middle toe pectinate.

COLOR. Head, nape and throat greenish black; a broad buff orange eye-stripe; reddish before the eye, and on the sides of the nape; above, blackish brown. Under surface and sides of the neck and breast, the flanks and thighs, reddish orange: vent greyish; beneath shining yellow. Orbits and rictus red. Legs brownish. *Immature* or *in change*, from a specimen shot November 1, in the neighborhood of New-York: Summit of the head and back of the neck blackish with a slight gloss of green; space before the eye grey; cheeks, chin and throat white, with a few obsolete rufous spots; lower part of the neck in front mixed with brown; sides of the rump varied with white; beneath glossy white; back and wings varied with reddish brown, dark brown and a slight tinge of slate; secondaries white, the posterior ones tipped with brown.

Length, 14·5 – 15·5.

This little aquatic bird, which is known under the various names of *Dipper*, *Water-witch*, and *Hell-diver*, appears in this State in June, and remains with us until November. It occurs also in the interior from 26° to 68° north. It breeds in this State, laying three or four white eggs spotted with brown. Feeds on insects, fishes, crabs, and fresh and salt-water shells. It is common to Europe and America.

THE CRESTED GREBE.

PODICEPS CRISTATUS.

PLATE CXL. FIG. 306 (IMMATURE).

(STATE COLLECTION.)

Colymbus cristatus. LINNÆUS, p. 222.
Podiceps id. LATHAM. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 417. RICHARDSON, F. A. Vol. 2, p. 410. NUTTALL, Man. Orn. Vol. 2, p. 250. AUDUBON, B. of A. Vol. 7, p. 308, pl. 479. GIRAUD, Birds of Long island, p. 383.

CHARACTERISTICS. Crested: a broad ruff round the neck. Sides of the head and of the body tinged with reddish. *Female*, no ruff; brownish grey; beneath white. Length, 19·0.

DESCRIPTION. Bill straight, compressed, tapering, 2·5 long. Nostrils oval. Tibia wholly feathered: tarsus much compressed. Two tufts of feathers on the head, and a large ruff or frill on the sides and fore part of the neck above. Second quill longest.

COLOR. *Adult male:* Brownish black, tinged with rufous above; occipital tufts and the ruff black, tinged with green; upper portion of the ruff reddish brown; chin and fore neck white. *Immature:* Bill blackish, reddish brown at the base; feet yellowish green; chin, neck, breast and abdomen greyish white, obscurely spotted with dusky; ruff dull brown beneath, somewhat lighter above; loral space dusky.

Length, 18·0–20·0.

The *Crested Grebe*, or *Dipper*, is commonly found in secluded ponds and lakes in the interior, although it is not unusual along the coast. Breeds in the higher latitudes. Eggs four, of a uniform yellowish white. Ranges from Mexico to the 68th parallel. Common to Europe and America.

THE RED-NECKED GREBE.

PODICEPS RUBRICOLLIS.

PLATE CXLI. FIG. 307.

(STATE COLLECTION. CABINET OF THE LYCEUM.)

Colymbus rubricollis et *subcristatus*, GMELIN.
Podiceps id. LATHAM, Ind. Orn. Vol. 2, p. 783. ID. Gen. Hist. Vol. 10, p. 27, pl. 166. BONAPARTE, Ann. Lyc. N. Y. p. 417. RICHARDSON, F. B. A. Vol. 2, p. 411. NUTTALL, Man. Orn. Vol. 2, p. 253. AUDUBON, B. of Am. Vol. 7, p. 312, pl. 480. GIRAUD, Birds of Long island, p. 384.

CHARACTERISTICS. Crested. Bill short; neck reddish beneath; front black. *Adult:* Cheeks and throat ash; crown and neck behind black: no ruff. *Young*, dull colored and spotted: cheeks and throat white; the former spotted with dusky. Length, 18·5.

DESCRIPTION. Bill stout, tapering from the base, 2·0 long and 0·6 high: a series of short parallel oblique ridges in the furrow anterior to the nostrils. Tufts on each side of the occiput disposed in a curved line, truncated behind, and composed of loosely webbed feathers. Tarsus much compressed, carinate on both edges, and 2·3 long.

COLOR. Bill black, yellow at base: feet yellow. Front, crown, crest and line down the back of the neck black tinged with green. Back and parts above brownish black. Cheeks, chin and throat ash-grey passing into white, spotted with brown under the eye. A bright chesnut-colored spot on each side of the neck, and in the full plumage this is dilated over the whole neck and breast. Secondaries white along their centres. The specimen (fig 307), shot September 28, in the neighborhood of the city, is in a state of plumage I have no where seen described. It was a male. Chin white, passing into light ash-grey on the sides of the face and throat. Frontlet, crown and middle of the neck brown, with the slightest tinge of rufous. Above deep blackish brown; the feathers margined with greyish. Secondaries white; shafts black, tipped gradually with more black. Sides of the rump black, striate with white; beneath soiled greenish glossy white.

Length, 17·0 – 18·0.

The *Red-necked Grebe* is a northern species which occurs rarely on the coast of this State in winter, and has scarcely been seen farther south. Dr. Kirtland has observed them in Ohio. It is a rare species. Its food and habits resemble those of the preceding. It ranges from 40° to 68° north. Common to Europe and America.

(*EXTRA-LIMITAL.*)

P. auritus, LATH. (NUTT. Vol. 2, p. 256) Crested. Black: secondaries white; inner quills white on the inner vanes; neck and breast black; crest and ruff very short, black: a long slender tuft of reddish feathers behind and beneath each eye. *Young*, white beneath. Length, 12·0.

GENUS HYDROKA. Nuttall.

Bill very stout, short, compressed, and strongly curved at the point. Nostrils somewhat rounded. Tarsus robust, shorter than the inner toe. Inner and middle toe united by a membrane extending beyond the first joint; the outer and middle one equal in length. With the other characters of the preceding genus.

THE DIPPER.

Hydroka carolinensis.

PLATE CXLI. FIG. 308.

Podiceps carolinensis, Lath. *Pied-bill Grebe*, Pennant, Arct. Zoology, Vol. 2, p. 497.
P. id. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 418. Richardson, F. B. A. Vol. 2, p. 412. Aud. fol. pl. 248.
P. (Hydroka) id. Nuttall, Man. Orn. Vol. 2, p. 259.
Sylbeocyclus id. Bonaparte, Geog. and Comp. List, p. 64. Giraud, Birds of Long island, p. 382.
Podiceps id. Audubon, B. of Am. Vol. 7, p. 324, pl. 483.

Characteristics. Feathers on the nape rather long. Bill with a black band. Chin and throat black. *Young:* Bill plain; chin white. Length, 14·0.

Description. Bill 0·5 high at the base. Nostrils oval, sub-basal. Tarsus 1·6, much compressed. Tail rudimentary; its place marked by a few hair-like feathers.

Color. Above dusky brown; back of the neck and rump darker. Wings reddish brown. An oblong black patch, an inch and a half or two inches long, on the chin and throat. Base of the neck and sides of the body brown, intermixed with black, grey and rufous; beneath silky yellowish white. An individual shot September 4 (fig. 308), exhibits some variations. Sides of the head and neck brownish, with obsolete black spots, and streaked with white; chin and throat with a few spots of reddish brown; flanks more tinged with rufous.

Length, 13·5 – 14·5.

The *Dipper*, or *Pied Dobchick*, is common in the ponds and lakes of this State, reaches us about August, and ranges southwardly during the winter. It breeds in high northern latitudes, and is very common in this State late in the summer and autumn. Its geographical range is between the 26th and the 68th parallels. Peculiar to America, but closely allied to the European species.

ORDER VI. NATATORES.

Bill of various forms. Legs for the most part placed far behind. Lower part of the tibia more or less naked. Tarsus compressed. Toes most usually four; the three anterior united by a membrane. Hind toe sometimes wanting. Nails short, depressed, not retractile. Plumage unusually compact, with shorter feathers beneath.

FAMILY ALCIDÆ

Bill much compressed, generally high at the base. Legs placed at the extremity of the body. Tibia partly naked. Feet three-toed, entirely palmated. Neck short. Wings very short, sometimes wholly unfit for flight. Tail very short.

GENUS URIA. Brisson.

Bill moderate, strong, straight, compressed, sharp-pointed, smooth. Upper mandible slightly deflected at the tip. Nostrils basal, pervious, sublinear, half concealed by a feathered membrane. Tarsus short and robust. First and second quills longest. Tail short, rounded, of twelve or more feathers.

THE BLACK GUILLEMOT.

Uria grylle.

PLATE CXXXIX. FIG. 303.

(COLLECTION OF H. C. DE RHAM.)

Colymbus grylle, Linnæus, p. 220. *Uria id.* Latham, Vol. 2, p. 797.
Black Guillemot. Pennant, Arct. Zool. Vol. 2, p. 516. Sabine, App. Parry. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 423.
U. grylle. Richardson, F. B. A. Vol. 2, p. 478. Nuttall, Man. Orn. Vol. 2, p. 523. Audubon, B. of A. Vol. 7, p. 272, pl. 474. Giraud, Birds of Long island, p. 377.

Characteristics. Feet red: a large white spot on the middle of the wings. *Summer*, black; wing-coverts white. *Winter*, varied with black and white. Length, 13 inches.

Description. Bill compressed, straight, 1·5 long measured from the corner of the mouth. Nostrils placed near the edge. Tarsus 1·2, slightly shorter than the middle toe. Tail short, rounded, of twelve feathers.

Color. *Summer:* General hue deep black, varied more or less with the season, with minute bars of whitish. Inside of the mouth and feet red. Secondary wing-coverts and the lower wing-coverts white. *Winter:* Wings and tail brownish black; the wings marked with the large white patch so conspicuous in summer. Back blackish, minutely barred with white. All the remaining parts of the head and body white, more or less barred with brown.

Length, 13·5 – 14·5.

The *Black Guillemot*, as it appears occasionally on our coast during severe winters, is subject to great variations in the quantity of white or black in its plumage. It is an arctic species, common to Europe and America. On this continent, it breeds from the Bay of Fundy northwardly. Eggs white, thickly spotted with dark brown especially around the larger end. Food, fishes, crustacea and other marine animals. It ranges from 75° to 40° north latitude.

THE FOOLISH GUILLEMOT.

Uria troile.

Colymbus troile, Lin. p. 220. *Foolish Guillemot*, Pennant, Arct. Zool. Vol. 2, p. 51, and Suppl. p. 69.
U. id. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 424. Richardson, F. B. A. Vol. 2, p. 477. Nuttall, Man. Orn. Vol. 2, p. 526. Audubon, B. of Am. Vol. 7, p. 267, pl. 473. Peabody, B. of Mass. p. 399. Giraud, Birds of Long island, p. 376.

Characteristics. Blackish; beneath white; secondaries white at tip; feet dusky. Bill nearly two inches long, compressed throughout. *Adult*, a white stripe behind the eye. *Young*, without this white stripe. Length, 17·0.

Description. Bill longer than the head; the upper mandible gently curved, and acutely notched at the tip. Tarsus 1·2. Tail of twelve feathers.

Color. Head and neck blackish brown; the remaining upper parts greyish black. Tips of the secondaries, circle round the eye and a narrow line behind it, and all beneath white, the white beneath rising into a rounded projection on the base of the neck above. *Young*, in which state it occurs most frequently on the coast of this State: Bill cinereous and yellowish at the base; the black above shaded with ash-brown. The narrow white streak behind the eye scarcely distinct, and blending in ashy spots with the white of the sides of the occiput. Tarsus and toes livid yellowish: webs brown.

Length, 16·0 – 18·0.

The *Foolish Guillemot*, or *Murre*, is a northern species, only occasionally visiting the coast of this State: it is more common on that of Massachusetts. They breed from the Gulf of St. Lawrence northwardly. Eggs 1 – 3, very large, varying in color from white to

green and blue, blotched and splashed with dark brown. Large numbers of the eggs of this and the preceding species are annually brought to Boston for sale. Its habits are similar to those of the preceding species. Ranges from 61° to 40° north. Common to Europe and America.

(*EXTRA-LIMITAL.*)

U. brunnichi, Sab. (Aud. B. of Am. Vol. 7, pl. 472.) Bill large and stout: upper mandible three times as long as broad. Sooty black; beneath white; secondaries white at tip; feet dusky, tinged with red. *Summer*, whole head black. Length, 18·5. *Northern regions of Europe and America.*

U. townsendi. (Aud. Ib. Vol. 7, pl. 475.) Brown or rufous above, barred with black. Bill straight, slender, acute, notched at tip. Beneath white. Bill black: feet yellow. Length, 9·0. *North-west coast of America.*

GENUS MERGULUS. Ray.

Bill very short, rather thick, convex, conical, slightly compressed, nearly as broad as high, covered at the base with downy feathers. Both mandibles notched at the tip. Nostrils basal, oval, partly concealed by a feathered membrane. First and second quills subequal, longest. Tail of twelve feathers.

THE SEA DOVE.

Mergulus alle.

PLATE CXXXVIII. FIG. 302.

(COLLECTIONS OF H. C. DE RHAM AND G. N. LAWRENCE.)

Alca alle. Linnæus, p. 210.
Little Auk. Pennant, Arct. Zool. Vol. 2, p. 512. Wilson, Am. Orn. Vol. 9, p. 94, pl. 74, fig. 5.
Uria (Mergulus) alle. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 425. Richardson, F. B. A. Vol. 2, p. 479. Nuttall, Manual Ornith. Vol. 2, p. 531.
Mergulus id. Bonaparte, Geog. and Comp. List, p. 65. Audubon, B. of A. Vol. 7, p. 257, pl. 469.
M. id., Pigeon Diver. Peabody, Birds of Mass. p. 400. Giraud, Birds of Long Island, p. 375.

Characteristics. Black; tips of secondaries and beneath white; under the wings black; bill and feet dusky. Bill 0·5. *Summer*, whole head black. Length, 6 inches.

Description. Tarsus compressed, partially concealed, 0·8 long: middle toe slightly longest. Length of wing 4·7. Tail very short, nearly even.

Color. *Summer:* Summit of the head, plumage of the back, wings and tail velvet-black; under surface of the head, throat, upper part of the breast, and thighs pitch-black. *Winter*, as they appear on our coast: Summit of the head, back, wing-coverts, rump and tail black glossed with greenish; quills brownish black; upper eyelid, edges of the scapulars and tips of secondaries white; chin and throat, extending nearly round on the sides of the throat, finely sprinkled behind and on the sides with brown; upper part of the breast obsoletely barred with dusky. All beneath white; the feathers black at their bases. Tarsus and toes yellowish; webs and feet black.

Length, 5·0 – 7·5.

This little *Sea Dove, Sea Pigeon, Greenland Dove, Pigeon-diver*, or *Ice-bird*, is but rarely seen on our coast. The specimen represented in the plate was shot on Long island. It ranges from 39° north to the north pole, but its more usual limits extend from Labrador northwardly. It occurs on the northwest coast near the mouth of the Columbia river, and is common to America and Europe.

(*EXTRA-LIMITAL.*)

M. antiquus, Bonap. (*Uria id.* Aud. B. of A. Vol 7, p. 263, pl. 470.) Bill and feet yellow; base of the former white. Chin black. On each side of the neck, long narrow white feathers, meeting below, and forming a crescent. *Young*, yellowish, spotted and barred with black. Tail broadly tipped with white. Length, 10·5.

Genus Ceratorynchа, *Bonaparte.* Bill short, longer than high, much compressed, smooth; the base not much feathered, but covered by a long obtuse bony process. First quill slightly longest. Tail very short, composed of fourteen rounded feathers.

C. occidentalis, Bonap. (*Uria id.* Aud. Vol. 7, p. 264, pl. 471.) Brownish black; beneath whitish: a few slender elongated whitish feathers at the corners of the mouth and behind the eyes. Bill and feet yellow. Length, 15·5. *Northwest Coast.*

Genus Phaleris, *Temminck.* Bill shorter than the head, dilated on the margins, almost quadrangular, notched near the tip: lower mandible truncated at the tip. Tibia almost entirely retracted into the belly. Tarsus acutely compressed. Tail short, of fourteen feathers.

P. nodirostra, Bonap. (Aud. Vol. 7, p. 255, pl. 468.) Bill with a rounded knob over the nostrils. Brownish black; beneath white mottled with dusky. Sides and front of the head with linear-elongate white feathers. Bill red: feet dull grey. Length, 6·0. *Northwest coast of America.*

P. superciliosa, Bonap. (*P. cristatella*, Aud. Ib. p. 253, pl. 467.) Dusky. A triangular horny plate at the base of the upper mandible. A tuft on the forehead of about twenty recurved linear feathers, 2·5 long. A few long white feathers behind the eye. Bill orange. Length, 10·0. *Northwest coast of America.*

P. psittacula. (Nuttall, Vol. 2, p. 534.) Black: belly white. A line behind the eyes, and a spot above, white. Ridge of the bill compressed. *Adult:* bill red. *Young:* bill dusky yellow. Length, 11·0. *Northwest coast of America.*

GENUS MORMON. Illiger.

Bill shorter than the head, very much compressed, as high as the head at the base, transversely and obliquely grooved on the sides, covered at the base by a wrinkled callous membrane: both mandibles much curved and notched. Nostrils margined, linear, narrow, almost entirely closed by a naked membrane. Nails much curved, acute. Tail of sixteen feathers.

THE ARCTIC PUFFIN.

Mormon arcticus.

PLATE CXXXVIII. FIG. 301 (Young).

(STATE COLLECTION.)

Alca arctica, Lin. p. 211. *Puffin*, Pennant, Arct. Zoology, Vol. 2, p. 511.
Mormon arcticus. Illiger, Prod. p. 283. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 430. Nuttall, Man. Orn. Vol. 2, p. 512. Audubon, Birds of Am. Vol. 7, p. 238, pl. 454. Giraud, Birds of Long island, p. 373.

Characteristics. Black; beneath white. A broad black collar round the neck. Bill red, much compressed: both mandibles with at least three lateral grooves before the nostrils; lower mandible but little curved. *Young*, yellowish dusky, smooth. Length, 12·0.

Description. Half of the bill adjoining the head, leaden blue; the remaining part red: upper mandible with four furrows; the lower with three. Irides hazel; orbits red. A triangular callous protuberance above the eye; an oblong one beneath. Top of the head and all above black, passing round the neck in a broad collar. Sides of the head and all the under parts pure white. Chin greyish or white. Legs and feet orange. From a fresh specimen shot December 12, on Long island: Bill, measured from above, 1·5 long, notched near the tip. Indistinct traces of the lateral grooves; the first in front of the nostrils most prominent: depth of the bill at base 0·9: lower mandible with a conspicuous angle, obliquely truncated at the tip: commissure sinuous. Tarsus 1·2, not as long as the middle or outer toe. Tail short, slightly rounded.

Color. Eyes dark hazel. Bill horn-color in front, darker towards the base. Inside of the mouth orange: no wrinkles at the corners of the mouth. Tarsus light greenish before, dark brown or blackish behind. Toes flesh-colored: webs light orange. Front and summit of the head blackish brown, composed of feathers forming an imperfect hood. A deeper hue of black commences on the middle of the neck, forms a collar around it, and covers all above. A disk of clear ash on each side of the head, including the eyes and the chin beneath, and

partly encircling the neck behind. A darker tint of brownish black within the ashen disk, including the eyes, and extending to the angle of the mouth and the base of the bill. Remaining parts beneath pure white. Sides and thigh-feathers brown.

Length, 12·0 – 13·5.

The *Arctic Puffin* visits the coast of this State almost every winter, but in inconsiderable numbers. Breeds from the coast of Labrador northwardly. Feeds on fish. Egg single, white. Ranges from 32° to 58° north latitude, and is common to the northern parts of Europe and America.

(*EXTRA-LIMITAL.*)

M. glacialis, Leach. (Aud. l. c. Vol. 7, p. 236, pl. 463.) Bill inordinately large and higher than the head, moderately compressed: both mandibles with at least two grooves before the nostrils; lower mandible much curved. Bill and feet yellow; crown and wings blackish brown; back and collar bluish black; beneath white. Length, 13·0. *Maine and northwardly.*

M. cirrhatus, Tem. (Aud. l. c. Vol. 7, p. 234, pl. 472.) Bluish black; beneath purplish brown; face white. A tuft of long slender pale yellow feathers from over and behind the eyes. Bill with a horny sheath at base, orange: feet red. Length, 15·0. *Maine and northwardly.*

GENUS ALCA. Cuvier.

Bill robust, compressed, broad at the base, higher in the middle, feathered to the nostrils, tumid, grooved and plaited on the sides, hooked at the point. Nostrils medial, half closed by the feathered membrane, and scarcely perceptible. Wings short; in one species, totally unfit for flight. Tail of twelve or sixteen acute feathers.

THE RAZORBILL.

Alca torda.

PLATE CXXXIX. FIG. 304.

(STATE COLLECTION.)

Alca torda (adult), *pica* (young). Linnæus, Syst. Nat. 12 ed. p. 210.
Razorbill Auk. Pennant, Arct. Zool. Vol. 2, p. 509.
A. torda. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 509.
Utamania torda, Leach. Bonaparte, Geog. and Comp. List, p. 66. Aud. Birds of Am. Vol. 7, p. 247, pl. 466.
A. id. Peabody, Orn. Mass. p. 401. Giraud, Birds of Long island, p. 374.

Characteristics. Black; beneath white. Wings, when folded, reaching to the rump. Tail wedge-shaped, of twelve feathers. *Adult:* bill with three or four lateral grooves. *Summer*, whole head black; a white line from the bill to the eye. *Young:* bill smooth. Length, 16·5.

Description. *Adult:* Bill much compressed, high and rounded; the profile of the upper mandible almost vertical at the tip; its depth at the angle of the upper mandible 0·8, and exceeding somewhat the distance between the nostrils and the tip of the bill. A narrow oblique slit along the base of the upper mandible; next to this, a white sinuous ridge extending across both mandibles; to this succeed two other ridges concentric with the preceding, and the rudiments of a third, all crossing the lower mandible. Tail graduated, of twelve acuminated feathers; the central pair more acute and longer than the others.

Color. Head, neck and all the upper parts deep reddish brown or black; the chin and fore part of the neck being somewhat more rufous. A narrow line of white runs from the base of the upper mandible, near the front, to the eyes. Secondaries tipped with white, forming a narrow band across the wings.

Young, shot November 3: Bill comparatively smooth; its height at the angle of the lower mandible 0·6: there are traces of a furrow along the base of the upper mandible, but the remainder is smooth: tail as in the adult. *Color*, black above; traces of the white stripe to the eyes, and of the white tips of the secondaries; chin, throat, sides of the head behind the eyes, and all beneath white. The white on the sides of the head extends over on the nape, and the black on the nape beneath extends around nearly to the middle of the neck in front; occasionally this is united by a band of speckled brown.

Length, 16·0 – 17·0.

The *Razorbill* appears along the coast of this State, in small numbers, every autumn and winter. Breeds from the Gulf of St. Lawrence along the coast of Labrador. Eggs one or two, very large, white blotched with brown chiefly about the larger end. Its geographical range on our coast, as far as yet ascertained, is between the 40th and 57th parallels. Common to America and Europe.

The following species presents so many variations from the normal type of the group, that it has been very properly erected into a distinct genus.

(*EXTRA-LIMITAL.*)

A. impennis, Linn. (Nutt. Vol. 2, p. 552.) Black; beneath white. Wings short, and unfit for flight. Tail short, rounded, of sixteen feathers. Bill grooved. A large white spot around the eye. *Young:* bill smooth, and no white spot. Length, 36·0. *Newfoundland and northwardly.*

FAMILY COLYMBIDÆ.

Bill longer than the head, straight, robust, sharp-pointed. Nostrils basal, linear, pervious. Feet short and stout. Toes four; the anterior wholly palmated: hind toe short, lobated.

GENUS COLYMBUS. Linnæus.

Bill straight, compressed, nearly cylindrical, tapering to the tip. Tarsus compressed, with acute edges. Anterior toes wholly palmated; the outer longest. Lores feathered. First and second quills longest. Tail short, rounded, of 18 to 20 feathers.

THE GREAT LOON OR DIVER.

Colymbus glacialis.

PLATE CXXXVII. FIG. 299.

Colymbus glacialis, Linn. p. 221. Pennant, Arct. Zool. Vol. 2, p. 518 (mature); No. 440 (young). Wilson, Am. Orn. Vol. 9, p. 84, pl. 74, fig. 3. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 420. Nut. Man. Orn. Vol. 2, p. 513. Audubon, B. of A. Vol. 7, p. 286, pl. 476. Giraud, Birds of Long island, p. 378.

Characteristics. Bill 4·0 long: rictus straight; lower mandible channelled beneath, widest in the middle. *Adult*, black, speckled with white; beneath white. Head and neck glossy black, with a white interrupted collar and gular band. *Young*, brownish. Length, 32·0.

Description. Edges of the bill inflected: nasal groove short. Tarsus sharp, and covered with reticulated scales. Hind toe with a small membrane. Tail of twenty feathers.

Color. Bill black. Head and neck dark greenish black. Across the throat, a band of white, longitudinally streaked with dusky; beneath this, another broad collar of the same color, and streaked in the same manner. Back black, with white quadrate spots forming bars. Beneath glossy white: a dusky band across the vent. Tail brownish black, fading into paler towards the tip. *Young*, brown above, obsoletely barred with dusky; sides of the neck streaked with dusky; beneath white.

Length, 31·0 – 33·0.

The *Great Diver*, or *Big Loon*, may be regarded as a perpetual resident in this State. It is mostly found in the interior of the State, breeding in the neighborhoods of our many beautiful sheets of water during the summer, and occurring on our seacoast in winter. In a nest near the banks of Marion river, emptying into Lake Raquet, I found two large drab-colored eggs, which presented remarkable discrepancies in shape; the one being acutely pointed at one end, and the other more globular. This species occurs throughout the Union from Texas to Maine, and throughout the interior to the Columbia river. It breeds from Maryland northwardly. Its geographical range is from 28° to 70° north latitude, and is common to Europe and America.

THE RED-THROATED LOON.

COLYMBUS SEPTENTRIONALIS.

PLATE CXXXVII. FIG. 300.

(STATE COLLECTION.)

Colymbus septentrionalis. LINNÆUS, p. 220. PENNANT, Arct. Zool. Vol. 2, p. 520. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 421. RICHARDSON, F. B. A. Vol. 2, p. 476. NUTTALL, Man. Orn. Vol. 2, p. 519. AUDUBON, B. of A. Vol. 7, p. 299, pl. 478. GIRAUD, Birds of Long island, p. 380.

CHARACTERISTICS. Bill 2·0 – 3·0 long, slightly upturned: lower mandible channelled. *Adult:* Head and neck glossy ash-color; front of the neck deep reddish brown; hind part of the head and the neck streaked with black and white. *Young*, ashy brown, with minute marginal spots on the dorsal plumage. Tail of twenty feathers. Length, 25·0.

DESCRIPTION. Bill black, slender, slightly recurved, tapering to a point. Tail very short, rounded, of twenty rounded feathers. Tarsus compressed, 2·8 long, shorter than the outer toe. Hind toe with a small lobe, and connected to the inner one by a web.

COLOR. *Adult:* Summit of the head, chin and sides of the neck of a deep ash; centre of the neck with a stripe of deep orange or reddish brown, widening beneath; occiput, back of the neck, upper part of the back and sides of the breast black, streaked with white, the white streaks becoming fewer beneath; back and wing-coverts brownish black, with distant minute white spots; wings, rump and tail black, the rump slightly glossed with green; beneath white; lower tail-coverts greyish, tipped with white. *Young:* Head and back of the neck ash, finely streaked with white; brownish black above, each feather having an oblong spot on either margin near the tip; neck beneath white, varied with light brown; white beneath; an obsolete dusky band across the vent; rump and upper tail-feathers bimaculate with white.

Length, 23·5 – 26·0.

The *Red-throated Loon*, or *Scape-grace*, as it is occasionally called, is comparatively a rare bird in this State, and the young are most usually found here. It breeds from Newfoundland northwardly. Eggs olive-brown, spotted with darker brown. It ranges on this coast from 36° to 74° north latitude, and is common to Europe and America.

(*EXTRA-LIMITAL.*)

C. arcticus, LINN. (AUD. B. of A. Vol. 7, pl. 477.) Bill 3·5; the upper mandible slightly curved; the lower not wider in the middle than at the base, and without groove beneath. Tail with 18 feathers. *Adult:* occiput and nape ash brown; front of the neck violet-black. *Young*, ashy brown above: occasionally a blackish band on the sides of the neck. Length, 29·0. *Northern Regions. Columbia river.*

FAMILY PROCELLARIDÆ.

Bill composed of several pieces, hooked at the tip. Nostrils tubular. Feet three-toed; or in place of the hind toe, only a sharp nail, which is itself sometimes wanting.

Obs. A family comprising about eight American species.

GENUS PUFFINUS. Brisson.

Bill longer than the head, sharply curved at the tip. Lower mandible pointed, deflected at the tip, following the curvation of the upper, with a seam on each side: mental angle obsolete. Nostrils in a double tube, extending one-fourth of the length of the bill. Tarsus equal to the middle toe in length. Webs full, entire. Tail rounded.

THE LARGE SHEARWATER.

Puffinus cinereus.

PLATE CXXXVI. FIGS. 297, 298.

(CABINET OF THE LYCEUM.)

Procellaria puffinus. Linnæus, p. 213.
P. cinereus, Cuvier. Bonaparte, Ann. Lyc. Vol. 2, p. 370.
Puffinus cinereus. Nuttall, Man. Orn. Vol. 2, p. 334. Audubon, B. of A. Vol. 7, p. 212, pl. 456 (male).

Characteristics. Bill 1·7 – 2·0 long. Tarsus 2·0. Tail conical. *Adult,* nearly entirely a uniform sooty brown. Tail shorter than the wings. *Young?* pure white beneath. Length, 19 inches.

Description. *Adult:* Nostrils concealed under the same vaulted tube. Tarsi much compressed, acute on both edges, 2·0 long. Hind nail 0·3, situated high up: middle nail dilated on its inner edge. First quill longest. Tail graduated, of twelve feathers. Tips of the wings extending about an inch beyond the tail.

Color. Head and all above blackish brown, with the tips of the scapulars lighter. Quills and tail brownish black. Throat and all beneath dark ashen grey; the tips of the feathers somewhat darker. Outer sides of the tarsi dusky: inner and the webs yellowish; the latter somewhat darker towards their margins. *Young?* tubes of the nostrils distinct. *Color:* head and all above chocolate-brown; all the feathers bordered with lighter; inner webs of the quills white at the base; chin, sides of the neck, and all beneath pure white; under tail-coverts tipped with dusky; quills and tail black.

Length, 18·0 – 20·0.

This large *Puffin*, or *Wandering Shearwater*, occurs all over the ocean, but is most abundant on the banks of Newfoundland, and is occasionally captured on the coast of this State. It has been observed from Mexico to Newfoundland, and is common to Europe and America. Its history is incomplete.

THE LITTLE SHEARWATER.

PUFFINUS OBSCURUS.

PLATE CXXXIV. FIG. 294.

(CABINET OF THE LYCEUM.)

Procellaria obscura. TEMMINCK, Man. Orn. Vol. 2, p. 808.
Puffinus obscurus. GRIFFITH, Cuv. Règne An. Vol. 8, p. 569. BONAPARTE, Ann. Lyc. N. Y. Vol 2, p. 371.
P. id., Dusky Petrel. NUTTALL, Man. Orn. Vol. 2, p. 336. AUDUBON, B. of A. Vol. 7, p. 216, pl. 458 (male).

CHARACTERISTICS. Brown; beneath white. Wings shorter than the tail. Tarsus 1·5. Length, 11·0.

DESCRIPTION. Bill slender, with the nasal tubes distinct, 1·2 long. Tarsus acutely compressed, robust. Hind nail small, conical, inserted 0·3 above the lower end of the tarsus. Wings curved towards their tips. Tail graduated; the outer feather being 0·8 shorter than the central pair.

COLOR. Uniform dusky brown above. Checks, eyelids, sides of the neck, and beneath white: a dusky patch on the sides of the breast. Under tail-coverts and lateral rump-feathers dusky; posterior edge of the tarsus and outer toe dusky; remaining parts yellowish.

Length, 10·0 – 11·0.

This little *Shearwater* resembles so entirely the young of the preceding in miniature, that with the exception of the dimensions and the uniform color of the back, the same description would nearly apply to both. Found from the coast of Mexico northwardly to New-York. Common to Europe and America. Its history incomplete.

(*EXTRA-LIMITAL.*)

P. anglorum, Ray. (Aud. B. of A. Vol. 7, p. 214, pl. 457.) Bill very slender, much incurved at the tip, 1·6 long. Tarsus 1·8. Tail rounded, of 12 feathers. Brownish black; beneath white. Length, 15·0. *Sable Island. Coast of Maine.*

Genus Diomedea, *Linnæus.* Bill longer than the head, very robust and hard, deeply seamed on each side, strongly hooked at the point. Lower mandible smooth: palate with serrated processes. Nostrils in distinct tubes on the sides of the bill. Feet stout, short. Tarsus a fourth shorter than the middle toe: no rudiment of hind toe or nail.

D. fusca, Bonap. (*Albatross*, Aud. B. of A. Vol. 7, p. 200, pl. 454.) Uniform dusky: bill black; feet yellow. Ridge of the bill carinate, entering the forehead in an acute angle. Length, 34·0. *Columbia river.*

D. nigripes. (Aud. Ib. p. 198.) Sooty-brown; beneath grey: feet black. Ridge of the bill broad and convex. Length, 36·0. *California.*

D. chlororhyncos, Gmel. (Aud. Ib. p. 196.) Bill compressed, convex above, black above, yellow beneath; feet yellow; head and neck ash-grey; beneath white. Length, 37·0. *California.*

Genus Procellaria, *Linnæus, Bonaparte.* Bill as long as the head, stout, broad and hard; lower mandible straight, somewhat truncated at the tip: mental angle projecting. Nostrils in a single tube. First quill longest. Hind toe merely a thick and obtuse nail.

P. glacialis, Linn. (Aud. l. c. Vol. 7, p. 204, pl. 455.) White; back and wing-coverts bluish grey; bill and feet yellow. Tail conical. *Summer*, a dusky spot before the eye. *Young*, pale cinereous, varied with brown. Length, 17·0. *Northern regions. Oceanic. Occasionally on the coast of the United States.*

P. pacifica. (Aud. l. c. Vol. 7, p. 208.) Head, neck and beneath white. Nasal tube straight; its ridge distinctly carinate. Length, 18·0. *Northwest coast.*

P. tenuirostris. (Aud. l. c. p. 210.) Bill more elongated and slender than the preceding; 2·0 long. Color of the preceding. Length, 18·5. An. var.? *Columbia river.*

GENUS THALASSIDROMA. Vigors.

Bill shorter than the head, slender, feeble; the upper mandible hooked; lower pointed, deflected at the tip, following the curvature of the upper; mental angle obsolete. Nostrils in a single tube. Feet long and slender. Tarsus longer than the middle toe. Hind nail acute, sometimes obsolete. Tail square or forked.

WILSON'S PETREL.

Thalassidroma wilsoni.

PLATE CXXIII. FIG. 271.

(CABINET OF THE LYCEUM.)

Procellaria pelagica. Wilson, Am. Orn. Vol. 7, p. 90, pl. 60.
P. wilsoni. Bonaparte, Jour. Acad. Nat. Sc. Vol. 5, p. 229, pl. 9.
Thalassidroma id. Id. Ann. Lyc. N. Y. Vol. 2, p. 367. Nuttall, Man. Orn. Vol. 2, p. 322. Audubon, B. of A. Vol. 7, p. 223, pl. 460. Giraud, Birds of Long island, p. 370.

Characteristics. Sooty black, with a reddish tinge. Nasal tube recurved. Tarsus 1·5. Wings extending beyond the slightly emarginated tail. Webs of the feet yellow, ending in black. Length, 6·0.

Description. Upper mandible much hooked at the tip, 0·5 long measured from above. First and third quills subequal, longer than the fourth; second longest. Tarsus slender, smooth, 1·4 long. Naked space on the tibia 0·7. Tail as if doubly emarginate; the central pair, and external one on each side (0·2) longest. No vestige of hind toe or nail.

Color. Upper and lateral tail-coverts and sides of the vent pure white; some of the secondaries tipped with white; remaining parts sooty black. Webs of the feet yellow in their centres.

Length, 6·5 – 7·5.

This little Petrel, or *Mother Carey's Chicken*, occurs commonly along our coast from Mexico to high northern latitudes. Breeds along the coast from Maine northwardly. One or two white eggs. Mr. Nuttall observed slight rudiments of a hind toe. Bonaparte is silent on the subject; but in those which I have examined, there was not the slightest vestige of toe or nail. Audubon describes the hind toe as conical, and so minute as scarcely to be perceptible. Geographical range between the 30th and 70th parallels.

THE FORK-TAILED PETREL.

THALASSIDROMA LEACHI.

PLATE CXXXV. FIG. 295.

(CABINET OF H. C. DE RHAM.)

Procellaria leachi. TEMMINCK, Man. Orn. Vol. 2, p. 812. BONAPARTE, Jour. Acad. Nat. Sc. Vol. 6, p. 229, pl. 9.
Thalassidroma id. ID. Ann. Lyc. N. Y. Vol. 2, p. 367. NUT. Man. Orn. Vol. 2, p. 326. AUDUBON, Birds of Am. Vol. 7, p. 219, pl. 459. GIRAUD, Birds of Long island, p. 372.

CHARACTERISTICS. Sooty greyish black. Tail deeply forked, subequal with the wings. Upper tail-coverts white, with dusky shafts. Tarsus 1·0. Length, 8 inches.

DESCRIPTION. Bill robust, 0·8 long, as broad as high at the base, much compressed at the tip. Nasal tube slightly turned upwards, and obliquely truncated. Tail deeply forked, and of twelve feathers. Hind toe minute, with a conical claw.

COLOR. Wings and tail black. Wing-coverts greyish at their tips, forming a broad band. Scapulars slightly tipped with light greyish. Vent on each side, and upper tail-coverts white. Chin and sides of the body light ash. Bill and feet, with the webs of the latter, black.

Length, 8·0 – 8·5.

The *Fork-tailed Petrel* is a northern species, but occasionally descends as low as the coast of this State. During violent gales, it is sometimes blown far inland, and has been seen in the interior of Pennsylvania and Virginia. Breeds from the coast of Maine northwardly. Its geographical range along the coast of America extends from 40° to 55° north latitude. Occurs on both sides of the Atlantic.

(*EXTRA-LIMITAL*)

T. pelagica, LINN. (BONAP. Ac. Sc. Vol. 6, pl. 8. AUD. B. of A. Vol. 7, p. 228, pl. 461.) *Mother Carey's Chicken.* Tail even or slightly rounded; the wings extending a little beyond it. Bill and feet black. Tarsus 0·9. Rump and upper tail-coverts white; the shafts black. Hind toe obsolete, with a minute claw. Length, 5·5. *Coast of Newfoundland.* Breeds in the Shetland islands.

FAMILY PELECANIDÆ.

Bill generally longer than the head, strong, sometimes compressed: mandibles dentate. Nostrils linear, often inconspicuous. Skin of the throat often naked, dilatable. Wings long and powerful. Feet short, robust. Toes four, long, all united by a continuous membrane. Tail of 12, 14 *or* 20 *feathers.*

Obs. This family corresponds with the Steganopodes of Illiger. It contains few North American species.

GENUS PHALACRACORAX. Brisson.

Bill somewhat longer than the head, straight, compressed. Upper mandible with a long furrow on each side, rounded above, with the ridge distinct, and strongly hooked at the tip: lower mandible with a small naked membrane produced on the throat. Nostrils basal, linear, concealed. Tibia feathered. Tarsus compressed. Middle claw with the margin dentated. Webs broad and full. Tail much rounded, of 12 – 14 rigid feathers.

THE CORMORANT.

Phalacracorax carbo.

Pelecanus carbo, Linnæus, p. 216. *Phal. id.?* Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 402.?
Phalacorax id. Audubon, B. of A. Vol. 6, p. 412, pl. 415. Giraud, Birds of Long island, p. 343.

Characteristics. Blackish. Tail of 14 feathers. *Summer*, a bluish black crest on the occiput and nape; throat white, coming up to a point in front. *Winter*, no crest; throat dusky varied with whitish. Length, 38·0.

Description. Bill strong, 3·5 long. Space round the eyes, and between these and the bill, naked.

Color. Bill blackish, greenish yellow at the tip and base. Crown, neck, breast and all beneath black, with blue and green metallic reflections. Back and scapulars ashen brown, glossed with purple and bronze. All the feathers edged with black. *Summer*, a broad band of white on the throat, rising into a point in front. Crown and upper part of the neck with long slender silky white feathers: several elongated white feathers on the thighs. Tail greyish black; the shafts black. *Young of the year:* Crown, nape and back deep brown; with a slight gloss of green; gular band greyish; front of the neck and all the under parts greyish brown, with whitish spots intermixed; above ash-grey, the feathers edged with deep brown.

Length, 37·0 – 39·0.

The *Cormorant* appears but rarely on the coast of this State, although it breeds, according to Mr. Nuttall, from the coast of Massachusetts northwardly. The eggs, varying from 3 to 4, are of a uniform pale bluish green. It ranges on this coast from 35° to 53° north latitude, and occurs on both sides of the Atlantic.

THE DOUBLE-CRESTED CORMORANT.

PHALACRACORAX DILOPHUS.

PLATE CXXI. FIGS. 267, 268.

(STATE COLLECTION.)

Pelecanus (Carbo) dilophus. RICHARDSON, F. B. A. Vol. 2, p. 473.
Phalacracorax id. NUTTALL, Man. Orn. Vol. 2, p. 483. AUDUBON, B. of Am. Vol. 6, p. 423, pl. 416.

CHARACTERISTICS. A small tuft of curved feathers on each side of the head. Bill 2·5 long. Tail wedge-shaped, of twelve feathers. Length, 33·0.

DESCRIPTION. *Adult male in spring plumage.* "Head, neck and all beneath greenish black; remaining parts black, more or less tinged with brown; bare space on the head, margin of the eyes, and gular pouch rich orange" (*Audubon*). A specimen shot on Long island, May 12 (fig. 267), presented the following characters: Bill stout, subquadrate, with crescent-shaped furrows on the sides like scales; depth of the bill at base, 0·8; width at base, 0·5; distance between the tip of the lower mandible and the edge of the membrane on the fore part of the throat, 3·9; length of the bill above, 2·6. Naked space from the base of the upper mandible, encircling the eye; thence, after making an angle, it passes downward under the throat. The tufts are composed of linear loosely webbed feathers, some of which are 0·9 long, becoming shorter as they approach the eye. Tarsus robust, compressed behind, 2·5 long. Nails much hooked, acute: outer toe and nail 4·0 long. *Color:* Quills and tail brownish black. Bill above black; lower mandible and naked space yellow. Legs and feet deep black. Remainder of head, neck and body greenish black. Above, the upper part of the back, wing-coverts and tertials bronze-brown; the margin of each feather deep black, and thus presenting a reticulated appearance. Length, 32 inches.

The specimen, fig. 268, killed October 23, I suppose to be the same species in its immature plumage. Summit of the head, back and sides of the neck, and all above dark brown. Upper part of the back and the wing-coverts, with the margins of the feathers, deeper brown: tertials with a slight tinge of green. Quills and lateral tail-coverts with the same gloss. Thigh-feathers dark greenish. Throat and upper part of the neck light reddish brown, paler near the membrane of the throat; lower part of the neck whitish, and all beneath light ash, streaked with rufous, becoming darker towards the vent. Same size with the preceding.

Length, 32·0 – 33·0.

This Cormorant appears more frequently on the coast of this State than the preceding, with which it has been frequently confounded. Its habits and geographical range the same with the preceding, but it is peculiar to the shores of America.

(*EXTRA-LIMITAL.*)

P. brasiliensis, Bonap. (*P. floridanus*, Aud. B. of A. Vol. 6, p. 430, pl. 417.) Black: neck and all beneath glossy green; gular sac bright orange; bill black above, blue beneath. Tail wedge-shaped, with acutely pointed feathers. Length, 29·0. *Mississippi and Florida southwardly.*

P. townsendi. (Aud. l c p. 438, pl. 418.) Greenish black above; sides of the head and beneath yellowish brown; bill yellow; gular sac orange: a few white hair-like feathers on the sides of the neck and body. Length, 35·0. *Columbia river.*

P. resplendens. (Aud. Ib. p. 440, pl. 419.) Bright glossy violet green. Quill and tail-feathers brownish black, and less glossy. Length, 27·0. An var. præced.? *Columbia river.*

GENUS PELECANUS.

Bill very long, broad, straight, much depressed. Lower mandible formed of two branches, supporting a naked membrane, dilated into a large pouch. Nostrils scarcely visible. Face and cheeks naked. Tibia naked below. Tail rounded, of twenty or twenty-four feathers.

THE BROWN PELICAN.

Pelecanus fuscus.

PLATE CI. FIG. 226.

Pelecanus fuscus, Lin. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 401. Nuttall, Man. Orn. Vol. 2, p. 476. Audubon, B. of Am. Vol. 7, p. 32, pl. 423 and 424.

Characteristics. Middle nail serrated internally. Primaries black; shafts white; first and fifth equal. *Adult*, blackish ash; back and wings hoary; crown yellowish; neck deep chesnut, margined on each side with white. *Young*, wholly brownish. Length, 54·0.

Description. Bill straight, depressed towards the end, 13·5 long. Naked part of the tibia with small scales. Tail rounded, and of twenty-two feathers.

Color. Whitish, and varied with brown and reddish. Space between the bill and eye blue. The hair-like feathers on the crown yellow. Back and sides of the neck deep chesnut brown, meeting in front on the lower part of the neck. Upper part of the neck white. General color of the remaining parts of the body dusky brown, streaked with white. *Young*, uniform dusky; bill and feet bluish.

Length, 52·0 – 54·0.

The *Brown Pelican* is only an occasional visitor to the coast of this State. One was shot six years since off Sandyhook. Its range is from North-Carolina southwardly. The *Great White Pelican* (*P. trachyrhyncus*) was formerly numerous on the Hudson, and other rivers and lakes of this State. At the present day it has entirely disappeared, and I do not know of its existence here even as an accidental visitor.

(*EXTRA-LIMITAL.*)

P. trachyrhyncus, Lath. (*P. americanus*, *White Pelican.* Aud. Ib. Vol. 7, p. 20, pl. 422.) Quills black; the first longer than the fifth. *Adult*, white: crest, bill, pouch and feet yellow: a bony process on the end of the bill. *Young*, whitish grey; back and wings dark ash. Length, 64·0. *From Carolina to Texas. Ohio, Missouri, Columbia river.*

GENUS SULA. Brisson.

Bill somewhat longer than the head, robust and straight, large at the base, compressed and attenuated towards the tip. Upper mandible furrowed laterally; the tip slightly hooked: gape extending beyond the eyes; face naked; nostrils concealed. Tibia naked beneath. Middle claw serrated on its inner edge. Tail graduated, of twelve rigid feathers.

THE AMERICAN GANNET.

Sula americana.

PLATE CXXII. FIG. 269 (IMMATURE).

(STATE COLLECTION.)

Sula bassana. Bonaparte, Anb. Lyc. N. Y. Vol. 2, p. 408. Nuttall, Man. Orn. Vol. 2, p. 495.
S. americana. Bonaparte, Geog. and Comp. List, p. 60. Audubon, B. of A. Vol. 7, p. 44, pl. 425.

Characteristics. White. Crown yellowish: primaries black; shafts below whitish: face bluish. *Young*, mottled with black and grey. Length, 37·0.

Description. Chin and space round the eyes naked. Near the base of the upper mandible, a sharp process and suture, which the bird is enabled to move in a small degree in swallowing a large fish. Bill slightly curved above at the point, 6·0 long.

Color. White: crown of the head buff; legs dusky; in front bluish yellow; quills black. *Yearling*, blackish brown unspotted. *Second moult*, from a specimen shot near Sandyhook (fig. 269): Bill 3·8 measured from above. Head and neck dark brown, with minute interrupted streaks of white, more numerous and pointed on the throat. Base of the neck and breast, and wing-coverts, with larger and more distant arrow-headed spots. Back, rump, wings and tail deep brownish black, with a few spots of the same shape on the back and rump. Upper tail-coverts white, with rounded spots of black. Axillaries brown, paler near the shafts, and (with the lateral tail-feathers) tipped with white. Shafts of the tail-feathers white; black towards the tips. Beneath white; the tips of all the feathers brownish. Under tail-coverts pale towards the shafts, brown on the edges, and an obsolete bar of the same towards the tips, which are white. Length, 36·0. After this moult, the plumage becomes gradually whiter until the fourth year.

Length, 36·0–37·0.

The *American Gannet* has, until recently, been considered as identical with the European species. I have had no opportunity of making a direct comparison between these two closely allied species. I supposed them indeed to be identical when I visited the Bass-rock in the Frith of Forth in 1818, and rely for the separation upon Charles Bonaparte.

Our Gannet breeds from the Gulf of St. Lawrence northwardly, and ranges along the coast to the Gulf of Mexico.

(*EXTRA-LIMITAL.*)

S. fusca, Briss. (Aud. B. of A. Vol. 7, p. 57, pl. 426.) *Booby.* Head, neck and all above dusky brown; abdomen white; face, bill and feet yellow. Tail long, wedge-shaped. Length, 31 inches. *Georgia and southwardly. Occasionally farther north.*

Genus Tachypetes, *Vieillot.* Bill longer than the head, strong, entire, with a suture close by the ridge. Both mandibles bent downwards; the upper with a notch near the tip. Nostrils basal, linear, elongated, and placed in the groove. Tarsus half feathered. Toes connected by deeply emarginated webs. Wings very long and pointed. Tail long, deeply forked.

T. aquilus, Lin. (Aud. Ib. Vol. 7, p. 9, pl. 421.) *Frigate-bird. Man-of-war-bird.* Brownish purple, iridescent, reflecting green and golden bronze. Tail brown; shafts white. Throat orange. Length, 41 inches. *Breeds from Florida Keys southwardly.*

Genus Plotus, *Linnæus.* Bill longer than the head, slender, pointed, finely serrated obliquely at the point. Nostrils basal, and concealed in the groove. Tarsus partly feathered above. Neck very long. All the toes united by a full membrane. Tail long, spreading and much rounded.

P. anhinga, Lin. (Aud. Ib. Vol. 6, p. 443, pl. 420.) *Snake-bird. Darter. Male:* neck and back greenish black; quills and tail brownish black; sides of the neck, secondaries and wing-coverts marked with white. *Female:* head, neck and breast reddish brown; belly brownish black. Length, 35·0. *North Carolina southwardly.*

Genus Phæton, *Linnæus.* Bill as long as the head, stout, compressed, curved above; margins obliquely serrated. Nostrils basal, concave, pervious, half closed by a membrane. Head and throat wholly feathered. Feet short. Tibia partly feathered. Tarsus naked, shorter than the second toe. Tail wedge-shaped; the two middle feathers excessively elongated.

P. æthereus, Lin. (Aud. Ib. Vol. 7, p. 64, pl. 427.) White varied with black: bill and feet yellow; webs black. Central tail-feathers white with a roseate tinge, 19·0 long; their shafts black. Total length, 30·0. *Florida southwardly.*

FAMILY LARIDÆ.

Bill rather longer than the head, hard, straight or only curved at the point, compressed, rarely cylindrical, acute; margin without denticulations. Wings very long. Legs in or near the equilibrium. The three anterior toes united. Hind toe small, free, sometimes represented by a nail only or altogether wanting.

GENUS RHYNCHOPS. Linnæus.

Bill flattened on the sides, and truncated at the point in the form of a blade; the edges of the upper mandible approaching, and hollowed in the form of a gutter: upper mandible shortest. Nostrils pervious, placed on the lower edge of the upper mandible. Webs of the toes emarginate. Hind toe touching the ground at the tip. Wings much longer than the forked tail, which is composed of twelve feathers.

THE BLACK SKIMMER.

Rhynchops nigra.

PLATE CXXIII. FIG. 272.

(STATE COLLECTION.)

Rhynchops nigra, Linnæus, p. 228. *Cutwater Skimmer*, Pennant, Arct. Zool. Vol. 2, p. 522.
R. id., Black Skimmer. Wilson, Am. Orn. Vol. 7, p. 85, pl. 60, fig. 4. Bonap. Ann. Lyc. N. Y. Vol. 2, p. 352.
R. id. Nuttall, Man. Orn. Vol. 2, p. 264. Audubon, B. of A. Vol. 7, p. 67, pl. 428. Giraud, Birds of Long-island, p. 346.

Characteristics. Black; beneath white tinged with roseate. Bill and feet red: the former dusky at the point. *Female:* tail-feathers white. *Young:* a broad mottled greyish band on the back of the neck. Length, 18·0.

Description. Lower mandible with numerous parallel oblique elevated lines on its sides, becoming obsolete towards the tip; at the base, an obtuse angle, and from this angle to the tip (in the female) 3·5 inches: depth of both mandibles near the base, 1·2. Claws acute and curved. Tarsus longer than the middle toe. Wings 13·0 – 15·0 long. Tail forked.

Color. Upper part of the head, neck, back, scapulars and wings glossy brownish black. Secondaries white on their inner vanes, and tipped with the same. Tail-coverts black, bordered with white. Tail-feathers white; brownish along their shafts. Forehead, chin, sides of the head, neck and all beneath white. In the recent specimens in full plumage, these white under parts have a roseate hue, which disappears in the cabinet. Length, 16·0 – 20·0.

The *Shearwater*, *Razor-bill*, *Cutwater*, *Skimmer*, *Flood Gull*, and *Skippang*, for it is known under all these names, reaches our coast from tropical America in May. It breeds

from Texas to New-Jersey; and although common enough with us, I have not ascertained whether it breeds on the coast of New-York. Feeds on fish, crabs and small shells. Eggs 3 – 4, white, with brown blotches of two shades. It ranges from the equator to 40° north latitude.

GENUS STERNA. Linnæus.

Bill as long or slightly longer than the head, almost straight, rather compressed, subulate and acute at the point, not hooked; the mandibles subequal: lower mandible with an angle near the base. Nostrils sub-basal, longitudinal, linear. Feet weak, small, four-toed; the web connecting the three anterior toes deeply concave on their edges. Hind toe and its nail very short, touching the ground merely at the tip. First quill longest. Tail of 12 feathers, long and generally forked.

THE COMMON TERN.

Sterna hirundo.

PLATE CXXV. FIGS. 275, 276.

(STATE COLLECTION.)

Sterna hirundo, Linnæus, p. 227. *Great Tern*, Pennant, Arct. Zool. Vol. 2, p. 524.
S. id. Wilson, Am. Orn. Vol. 7, p. 76, pl. 60, fig. 1. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 354. Nuttall, Man. Orn. Vol. 2, p. 271.
S. wilsoni. Bonaparte, Geog. and Comp. List, p. 61. Audubon, B. of Am. Vol. 7, p. 97, pl. 433.

Characteristics. Bill rather robust, red, tipped with black. Crown black. Quill-shafts white: outer web of the first quill, and a stripe on the inner web near the shaft, bluish gray or black. Tail deeply forked. Tarsus red, nearly an inch long. *Young:* hind head greyish, more or less black; above greyish, varied with rufous. Length, 15·5.

Description. Bill tapering to an acute point, two inches long from the angle of the mouth; the lower mandible slightly shortest. Tibia partly denuded. Outer tail-feathers tapering; the inner rounded.

Color. *Adult* (fig. 275): Front, crown and hind head jet black. Bill and feet bright red; the former black towards the tip. Back, scapulars and wings pearl-grey. Chin, sides of the face, ridge of the wings, tips of wing-coverts and secondaries, rump and under tail-coverts white. Beneath light pearl-grey. Outer web of the long lateral tail-feathers brownish grey; outer webs of the remainder light grey; inner webs of all white: the inner webs of all the primaries, except the first, darker than the outer, with an oblong white spot becoming larger towards the longest quills. *Young* (fig. 276): forehead and sides of the neck greyish white. All above pearl-grey, tinged with rufous. Crown irregularly marked with black. Bill and feet greenish yellow. Length, 14·0 – 16·0.

The *Big* or *Common Tern* appears in great numbers along our coast, and on the inland lakes, about the middle of April, and soon after begins to breed. The nest is a mere cavity scooped in the sand, containing 3 – 5 greenish brown eggs blotched with blackish brown. It leaves us in the autumn for the south, and hence is generally known here as the *Summer Gull*. In Massachusetts it is called *Mackerel Gull*, from its simultaneous appearance with that fish. This or a closely allied species has recently been separated from *S. hirundo*, by the Prince of Canino, but the specific differences are not very obvious. It is very widely distributed throughout Europe and America. With us it ranges from the tropics to the arctic circle.

THE CAYENNE TERN.

STERNA CAYANA.

PLATE CXXVI. FIG. 277.

(COLLECTION OF H. C. DE RHAM.)

Sterna cayana. LATHAM, Ind. Orn. Vol. 2, p. 804. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 353. NUTTALL, Man. Orn. Vol. 2, p. 268.
Thalasseus id. BONAPARTE, Geog. and Comp. List, p. 61.
Sterna cayana. AUDUBON, B. of A. Vol. 7, p. 76, pl. 429. GIRAUD, Birds of Long island, p. 355.

CHARACTERISTICS. Bill long and very robust, red. Tail moderately forked. Tarsus 1·5 long, black: webs entire. Crown black. *Young*, brownish above, varied with yellowish brown and black. Length, 19·0.

DESCRIPTION. *Adult:* Head and hind head black; above greyish blue. Quills bluish grey on their outer webs, white on the inner webs, and darker towards their edges. *Young* (fig. 277): Bill 3·0 along the gape: angle towards the tip of the lower mandible distinct. Tarsus stout and rather rounded: naked portion of the tibia 0·7. Tail forked to the depth of one inch.

COLOR. Bill bright reddish. Legs and feet dusky, tinged with reddish. Front, summit of the head and occiput black, minutely streaked with white; this extends down the nape. Space on the side of the head, anterior to the eye, and on the auriculars, deep blackish. Back and wing-coverts pearl-grey, slightly tinged with rufous; the feathers with angular brown bars, and tipped with light ochreous. Tail feathers pearl-grey, with spots or obsolete bars of brown near their ends, and tipped and margined with white. Quills hoary brown on their outer webs, darker on the margins of their inner webs. Rump and all beneath pure white; the white forming a collar round the neck. Length, 16·0.

Length, 16·0 – 19·0.

This species occurs sparingly on the seacoast of New-York. It resembles in size, and in its robust tarsi, the smaller Gulls. Breeds from Florida southwardly. Ranges from the intertropical regions to 55° north latitude.

THE BLACK TERN.

STERNA NIGRA.

PLATE CXXVI. FIGS. 278 and 278 A.

(STATE COLLECTION.)

Sterna nigra, LIN. p. 227. PENNANT, Arctic Zoology, Vol. 2, p. 525 (adult).
S. plumbea. WILSON, Am. Orn. Vol. 7, p. 83, pl. 60, fig. 3 (young).
S. nigra. BONAPARTE, Ann. Lyc. Vol. 2, p. 355. RICHARDSON, F. B. A. Vol. 2, p. 415.
Hydrochelidon id. BONAPARTE, Geog. and Comp. List. AUDUBON, B. of Am. Vol. 7, p. 116, pl. 438.

CHARACTERISTICS. Bill black. Tail moderately forked. Tarsus and middle toe subequal: webs deeply concave. *Summer*, nearly all blackish. *Winter*, head and neck deep black; front, throat and vent white. *Young*, forehead and all beneath white; hind head blackish; back varied with rusty. Length, 8·5.

DESCRIPTION. Bill slender, acute, somewhat curved above, 1·0 long: mental angle nearly medial. Tibia partly bare: webs very concave on the margin, scarcely extending beyond the middle of the toes. Tail slightly forked; the outer feathers 0·8 longer than the middle pair.

COLOR. *Adult in full plumage:* Lower tail-coverts white. Bill black: feet reddish brown. Wings and tail bluish black. All the remaining parts black. From specimens shot in July and August: Head, neck and all beneath, except the white vent and under tail-coverts, deep brownish black; back, wing-coverts, rump and tail dark slate; quills blackish brown; forehead, chin and cheeks whitish, spotted and streaked with brown (fig. 278). In some individuals, the throat and breast are mottled in the same manner, showing that the birds were changing to their winter dress. The young (278 A), killed at the same time, correspond in their markings with that described and figured by Wilson, being reddish brown above and white beneath.

Length, 8·0–9·0.

The *Black Tern* is not very abundant on the coast of this State. It appears to prefer the marshes of the interior, where it will probably be found to breed. It occurs through the Western States and along the great lakes. It has a wide geographical range, occurring from the tropics to the 69th parallel. Is found equally in Europe and America. The genus HYDROCHELIDON of Boié appears to include a few species distinguished by the tenuity and acuteness of the bill, and the concavity of the webs of the feet.

THE MARSH TERN.

STERNA ANGLICA.

PLATE CXXVII. FIG. 279.

(CABINET OF THE LYCEUM.)

Sterna anglica. MONTAGU, Ornithol. Dictionary, supplement and figure.
S. aranea. WILSON, Am. Orn. Vol. 8, p. 143, pl. 72, fig. 6. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 354.
S. anglica. NUTTALL, Man. Orn. Vol. 2, p. 269.
Gelochelidon aranea. BONAPARTE, Geog. and Comp. List.
S. anglica. AUDUBON, B. of Am. Vol. 7, p. 81, pl. 430. GIRAUD, Birds of Long island, p. 353.

CHARACTERISTICS. Bill short, black, stout and very deep. Quill-shafts white. Tail broadly and deeply emarginate. Tarsus 1·2, and slightly longer than the middle toe and its nail. Webs deeply concave. Hind nail nearly straight. *Summer*, crown jet black. *Winter*, crown white: a black spot on each side of the eye. Length, 13·5.

DESCRIPTION. Bill remarkably robust, broadly curved above, and much compressed; mental angle nearest the tip, prominent, and from thence straight to the base: length 2·0; depth 0·5. Tail broad; the outer feathers 1·5 longer than the medial pair.

COLOR. Crown and hind head jet black. Bill and feet uniform black. Above, the back, scapulars and wing-coverts pearl-grey. Upper surface of the tail very light pearl-grey. Line from the nostril beneath the eyes, sides of the neck, rump, chin and all beneath pure white. Ends of the quills deep brownish grey. *Young:* crown varied with grey and white.

Length, 12·5 – 14·0.

The *Marsh Tern* appears but rarely along the coast of this State, and, like the preceding, is more frequently observed in the interior along the shores of the great lakes. Mr. Audubon states that it breeds from the mouths of the Mississippi to Connecticut: from 3 – 4 greenish olive eggs spotted with brown. It ranges from 44° north latitude to the tropics. Common to Europe and America.

THE ARCTIC TERN.

Sterna arctica.

Sterna arctica. Temminck, Vol. 2, p. 472. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 351. Sabine, Parry's Voyage. Richardson, F. B. A. Vol. 2, p. 414. Nuttall, Man. Orn. Vol. 2, p. 275. Audubon, Birds of Am. Vol. 7, p. 107, pl. 436.

Characteristics. Bill moderate, slender, and with the feet red. Crown black: outer web of the first quill black. Tail greatly forked, and just exceeding the wings. Tarsus 0·7. *Young*, with the nape only darker. Length, 14·5.

Description. Bill compressed, straight, acute, 2·0 along the gape. Tail deeply forked; the outer feathers four inches longer than the middle pair.

Color. Bill and feet red; nails black. Above deep pearl-grey; beneath of the same color, except the lower tail-coverts, which are whitish. Crown and elongated occipital feathers black, tinged with greenish. Outer quill, and occasionally the next, with the outer webs black.

Length, 14·0 – 15·0.

I have never met with this very distinct northern species in this State, but I have been credibly informed that it occasionally appears here, and the Prince of Canino states that it is not rare in the autumn on the seacoast of the adjoining State of New-Jersey. Breeds from the polar seas to Maine, and occasionally migrates farther south. Ranges from the seventy-fifth to the thirty-eighth parallels, and occurs on both shores of the Atlantic.

THE SANDWICH TERN.

STERNA CANTIACA.

PLATE CXXIV. FIG. 274.

(CABINET OF THE LYCEUM.)

Sterna cantiaca, GMELIN. *S. boysii?* MONTAGU, Orn. Dict. Suppl. TEMMINCK, Vol. 2, p. 735.
S. cantiaca. AUDUBON, B. of A. Vol. 7, p. 87, pl. 431. NUTTALL, Man. Orn. Vol. 2, p. 276.

CHARACTERISTICS. Bill long, black; the point yellow. Feet short and black. Quill-shafts white. Tail deeply forked. *Summer*, crown black. *Winter*, hind head only marked with black. Length, 15·0.

DESCRIPTION. Bill robust, nearly straight, compressed, 2·0 long and 0·4 deep at the base: mental angle slight, nearly medial. Tail deeply forked; the outer feathers acute, 1·3 longer than the adjoining ones and 3·0 longer than the middle pair. Tarsus 1·0. Naked portion of the tibia 0·5. Nail of the middle toe incurved, dilated on its inner edge: hind nail short. Webs deeply concave.

COLOR. Crown, occiput, and hind neck deep bluish black. Back, scapulars and wing-coverts light pearl-grey. Back of the neck, a line from the nostrils beneath the eyes, rump, tail, chin, sides of the neck and all beneath pure white. Quills deep grey-brown, approaching to black at the tips: inner webs bordered with white. Legs black, tinged with reddish. Bill black; its point yellow.

Length, 15·5 – 16·0.

The *Sandwich Tern* has been little noticed on our coast, probably on account of its strong resemblance to other species, particularly to the *Common Tern* and the *Roseate Tern*. Mr. Audubon observed them breeding in Florida. Eggs yellowish grey, spotted and blotched with pale blue and reddish. It is at present known to occur in Texas, Florida and New-York, but its geographical range is yet unknown. It is found on both sides of the Atlantic.

THE ROSEATE TERN.

STERNA DOUGALLI.

PLATE CXXVII. FIG. 280.

(CABINET OF THE LYCEUM.)

Sterna dougalli. MONTAGU, Orn. Dict. Suppl. (figure). TEMMINCK, Vol. 2, p. 738. AUDUBON, B. of A. Vol. 7, p. 112, pl. 437. NUTTALL, Manual Ornith. Vol. 2, p. 278. KIRTLAND, Zool. Ohio, p. 166. GIRAUD, Birds of Long island, p. 351.

CHARACTERISTICS. Bill long, slender, black, orange at the base. Crown and hind part of the neck black. Quill-shafts black. Tail deeply forked, longer than the tips of the folded wings. Tarsus 0·9. Length, 14·5.

DESCRIPTION. Bill nearly straight, very slender towards the tip; the upper mandible somewhat longest, 2·0 in length, 0·3 deep at the base. Tail deeply forked; outer feathers very acute, 1·8 longer than the adjoining one and 3·3 longer than the middle pair, and extending 1·3 beyond the tips of the closed wings. Hind toe exceedingly small, and barely touching the ground.

COLOR. Bill brownish black, deep reddish at the base. Feet dark reddish. Crown and elongated occipital feathers black; this extends low down on the back of the neck, where it becomes dilated. Upper parts pearl-grey. Outer webs of the three first quills brownish black, margined with the same along the shafts on the inner webs. Under parts white, more or less tinged with faint roseate. Tail white.

Length, 14·0–15·0.

The roseate hue on this Tern is not always obvious, and soon becomes lost in cabinet specimens. It is not common on this coast, or at least has been little observed. Mr. Nuttall has found it on the coast of Massachusetts, and Mr. Audubon discovered it breeding on the Florida Keys. It is probably a tropical species, extending its northern migrations through the interior. Dr. Kirtland has observed it in Ohio. It is common to Europe and America.

THE SILVERY TERN.

STERNA ARGENTEA.

PLATE CXXIV. FIG. 273.

(STATE COLLECTION.)

Sterna minuta. WILSON, Am. Orn. Vol. 7, p. 80, pl. 60, fig. 2. BONAPARTE, Ann. Lyc. N. Y. Vol 2, p. 355.
S. argentea. MAX. DE NEUWIED, Voy. Vol. 1, p. 67. TEMMINCK, Man. d'Orn. Vol. 2, p. 754.
S. id., Silvery Tern. NUTTALL, Man. Orn. Vol. 2, p. 280.
S. minuta. AUDUBON, B. of A. Vol. 7, p. 119, pl. 439.

CHARACTERISTICS. Bill moderate, yellow, black at tip : crown black; forehead white. First two quills and their shafts black, except a broad white stripe on their inner webs. Tarsus yellow, 0·5 long. Tail moderately forked. Webs entire : nails long and acute. *Young :* crown and upper parts varied with soiled white and dusky. Length, 9·5.

DESCRIPTION. Bill compressed, acute, somewhat curved above. Tail shorter than the wings; the outer feather 1·5 longer than the middle pair.

COLOR. Forehead, and a short line extending to or above the eye, pure white : a black stripe extending from behind the nostrils through the eye, and uniting with the black on the crown. Back, wing-coverts, quills (except the first two or three), and the tail above deep pearl-grey. All beneath silvery white. In the color of the quills there appear to be some variations, and more extended observations are necessary. In a male adult (shot in July), the two first quills with their shafts were black on the upper surface, bordered with white on the inner web, which border gradually narrowed and became lost towards the tips; beneath, the shaft, outer web and border of the inner web of the first quill white, becoming dusky at the tip. In an adult female obtained at the same time, the upper surface of the three first quills, except the margins of the inner webs, are greyish brown, and the shafts black. *Young :* Crown white, streaked or spotted with brown. Hind head and all above varied with white, brown and grey. Quills deep brownish grey. A dusky stripe through the eye. Length, 9·0 – 10·0.

This species has recently been separated from the *S. minuta* of Europe, with which it appears indeed very closely allied. The chief differences appear to be that the *Silvery Tern* or *Little Tern* is larger, and the whole upper parts (with the tail) lighter than in the European species. Temminck, however, in speaking of the *S. minuta* of Europe, observes that " cette espèce est absolument la même dans l'Amérique septentrionale." We may then probably have two species, which have been confounded under one name. The *Silvery Tern* breeds from Texas to Labrador. It penetrates into the interior along the great lakes, and probably passes the winter within the tropics. On this coast, it is sometimes called the *Little Sheepshead Gull,* from its supposed simultaneous appearance with the *Sargus ovis.* I have not found its nest, but the eggs are light yellowish white with irregular dark brown spots and blotches.

(*EXTRA-LIMITAL.*)

S. stolida, Lin. (Aud. Vol. 7, p. 123, pl. 440.) *Noddy.* Sooty brown. Bill black; crown white. Tail wedge-shaped, long. Length, 16·0. *Florida southwardly.*

S. fuliginosa, Gm. (Aud. Vol. 7, p. 90, pl. 432.) *Sooty Tern.* Forehead, outer tail-feathers and all beneath pure white. Bill, feet, stripe to the eye, and all above blue-black. Outer tail-feathers 4·0 longer than the middle pair. Length, 16·0. *Florida southwardly.*

S. havelli. (Aud. Vol. 7, p. 103, pl. 434.) Bill, patch through the eye, and ends of five primaries black; dusky grey above. Bill yellowish at tip. Feet orange-yellow. Beneath white. Length, 15·5. *Florida, Mississippi, Texas.*

S. trudeauii. (Aud. Vol. 7, p. 105, pl. 435.) Bill yellow at base and tip; the remainder black. Feet orange-yellow. Stripe through the eye blackish grey. Fore part of the head, cheeks and upper part of the throat white. All else above and beneath, greyish blue. Length, 16·0. *Coast of New-Jersey.* An var. *S. anglicæ?*

GENUS LARUS. Linnæus. Auctorum.

Bill moderate, of one piece, robust, hard, straight, compressed. Upper mandible rounded above, rather sharp, and curved at the point. Mental angle distinct. Nostrils medial, longitudinal, linear, open, pervious. Hind toe very small, articulated high up on the tarsus, so as not to touch the ground; in one species, entirely wanting. Tail usually even, rarely forked.

THE WINTER GULL.

Larus argentatus.

PLATE CXXII. FIG. 270 (SUMMER). — PLATE CXXIX. FIG. 284 (WINTER). PLATE CXXX. FIG. 286 (VARIETY).

(STATE COLLECTION.)

Larus argentatus, Brunn. Pennant, Arct. Zool. Vol. 2, p. 533. Temminck, Vol. 2, p. 764. Nuttall, Man. Orn. Vol. 2, p. 304. Audubon, B. of A. Vol. 7, p. 163, pl. 448.

Characteristics. Pearl-grey. Tail and all beneath white. Bill yellow; the mental angle orange. First 5 or 6 quills gradually black, and spotted and tipped with white. Length, 25·0.

Description. Bill 2·0 long, 0·8 deep at the mental angle. Nostrils sublinear, dilated somewhat in front. Tarsus varying in length from 2·4 to 3·0. Tail broad, even or very

slightly rounded. *Summer*, from apparently a young specimen, 24·0 long. *Color:* Secondaries, base of primaries, tertials and back pearl-grey. Upper part of the head and neck faintly tinged with greyish. Chin, ridges of the wings, lower part of the back, rump, tail and all beneath pure white. Bill yellow, with an orange spot on the mental angle: legs yellowish brown. *Winter*, from a recent specimen, shot on the coast in December: Upper mandible bright yellow at the tip, dark brown at the base including the nostrils; beneath bright orange on the mental angle. Eyes yellow. Head and neck white, streaked with a few light brownish feathers producing a faint ashen hue. Mantle and wing-coverts pearl-grey: the six first quills marked with black towards their extremities, and tipped with white; the first broadly marked, and the succeeding gradually less to the sixth, where it becomes a narrow black band. In addition to this, there is on the first quill a broad white spot on the inner web, and an adjacent long white dash on the outer vane near the tip: the second quill has a round white spot on the inner vane alone. Remaining portion of the quills pearl-grey; the shafts brown. Legs pale slate. All the remaining part of the body pure white. Length, 28 inches.

Length, 24·0 – 28·0.

I have not been able to satisfy myself of the specific identity of these two specimens, and yet they nearly coincide with the descriptions of authors. The detailed account of *argentatoides*, as given by Richardson, agrees in the main with our bird in its winter plumage, but differs chiefly in the length of the tarsus. The young of the *Winter Gull*, in winter, are greyish brown mottled with yellowish above, greyish beneath; quills and tail brownish black, tipped with white. In this state of plumage, they are called the *Grey Winter Gull*.

In the Cabinet of the Lyceum, there is a specimen of a large gull which is labelled *L. glaucus*, but which does not coincide with the descriptions of that species, unless it is supposed to be in an immature state. Mr. Audubon regards it as a large variety of the *Winter Gull*, and considers the true *glaucus* as not having been ever seen by him on the coast of the United States. The bill (Plate 130, fig. 286) is robust, 2·1 long measured from above, 0·9 deep at the mental angle; tarsus 2·8, and subequal with the middle toe and its nail; naked space on the tibia 0·7. *Color*, universally of a dingy white, streaked and mottled with very light brown; head and neck finely streaked with brown; sides of the vent and under tail-coverts barred; the wing-coverts with zigzag marks; tail-feathers spotted, margined and tipped with dingy white. Length, 25·0.

This species breeds from Maine to the arctic circle; and ranges, during the autumn, winter and spring, along the coast and the great lakes to Mexico. Mr. Audubon describes them as breeding on trees. The eggs are dull yellowish, blotched and spotted with dark umber. Common on both sides of the Atlantic.

THE GREAT BLACK-BACKED GULL.

LARUS MARINUS.

PLATE CXXIX. FIG. 283.

(STATE COLLECTION.)

Larus marinus, LIN. PENNANT, Arct. Zool. Vol. 2, p. 527. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 362. NUTTALL, Man. Orn. Vol. 2, p. 308. AUDUBON, B. of Am. Vol. 7, p. 172, pl. 450. GIRAUD, Birds of Long island, p. 361. KIRTLAND, Zool. Ohio, p. 166.

CHARACTERISTICS. Back and wings deep bluish black; quills with black shafts, tipped at the point with white. Tarsus 3·3. *Summer:* head and neck pure white. *Winter*, same parts with brownish streaks. *Young*, mottled with dull grey and brown. Length, 28·5.

DESCRIPTION. Bill robust, compressed, 3·0 long, and 1·1 deep at the mental angle. Tail moderate, even.

COLOR. *Winter:* Bill yellow or yellowish green, with an orange spot on the mental angle. Eyelids red. Feet yellow; the nails black. Head, neck, rump, tail, and all the lower parts pure white. Head, face and nape, in specimens obtained early in the autumn, lightly streaked with brown. The first four or five quills tipped with white; the second, third and fourth with a broad black band towards the end of the tips.

Length, 28·0 – 30·0.

This is the largest gull that appears on our coast, and is represented as exceedingly bold and predacious in its habits. It ranges also along the great lakes, and has been observed in Ohio. On the coast, it breeds from Labrador northwardly. In the winter, it ranges commonly to New-York, but extends its migration to Florida. Has been noticed on the North-west coast. Common to Europe and America.

THE COMMON AMERICAN GULL.

LARUS ZONORHYNCHUS.

PLATE CXXVIII. FIG. 282 (YOUNG).—PLATE CXXX. FIG. 285 (ADULT).

(STATE COLLECTION.)

Larus zonorhynchus et *canus*. RICHARDSON, F. B. A. Vol. 2, pp. 420 and 421. NUTTALL, Man. Orn. Vol. 2, pp. 299 and 300.

L. zonorhynchus. AUDUBON, B. of America, Vol. 7, p. 152, pl. 446. GIRAUD, B. of Long island, p. 360.

CHARACTERISTICS. Mantle bluish grey. Head, tail and all beneath white. Feet and bill yellow; the latter usually with a dark ring. Tarsus 2·0. Outer quills black, tipped with white. *Young*, mottled with grey, brown and dusky. Tail with a black subterminal band. Length, 19·0.

Description. Bill straight, compressed, 1·4 measured from above, 0·7 from the anterior part of the nostrils, and 0·5 deep at the mental angle.

Color. Bill yellow at the tip; then blackish to the nostrils; beyond which, on the upper mandible, it is dark yellowish; on the lower, dark green. Mantle, secondaries, back and inner webs of the quills towards the base, pearl or bluish grey; the black on the quills becoming a mere bar on the fifth. The white spot on the first quill 0·5 long; on the second smaller, and confined to the inner web alone: the first five tipped with white; the succeeding ones slate-blue, fading into white at the tips. Legs dark greenish or bluish. Length, 18·5.

The *Brown Winter Gull*, of which we have five specimens before us, presents the following: Summit and sides of the head white, streaked with brown. Mantle pearl-grey, varying in intensity and extent. Quills black, slightly tipped with white: secondaries pearl-grey on their outer webs, passing into brown, and tipped with white. Above rusty brown; the feathers tipped and margined with whitish. Rump white with irregular brown spots; beneath brown and white, the white apparently enlarging with age. Under tail-coverts white, with 4 – 6 angular brownish bars, tipped with white, and becoming obsolete with age. Axillaries white, faintly bordered with brown. Tail white, with a broad black subterminal band, tipped with white. Lateral tail-feathers white for two-thirds of their length, sprinked with dusky on their outer webs; and in some specimens, this color appears to be more intense with age on the outer edge of the web. Occasionally a white spot on the band of the outer web (sometimes on both) of the outer tail-feathers. Bill yellowish at the base, dark colored beyond; and in the most aged, yellow at the extreme tip. Feet yellowish. Length, 15·0 – 18·0.

In another specimen (Plate 128, fig. 282), obtained in March, which I was for a long time disposed to regard as the *fuscus* of Temminck, the bill and legs are yellow; the former with a dark subterminal band. Head and beneath the eyes with abbreviated streaks of brown. Mantle pearl-grey; the feathers beneath with a large dark brown spot towards the tip, bordered with white. Coverts brown, margined with white and yellowish. Three first quills totally black above, passing into blackish brown at the tips; the shafts white beneath; the inner webs of the succeeding quills lighter: faint traces of white on the tips of all the quills. Rump and tail-coverts with brown arrowheaded marks. A black band 1·7 broad on the end of the tail, which is slightly tipped with white; the lateral feathers greyish sprinkled with brown, and the outer has in addition a white spot on the outer web near the tip. Beneath white, sparsely spotted and barred on the sides with brown. Axillaries white, faintly edged with brown. Length, 18·5.

Length of the species, 18·0 – 20·0.

The changes of plumage in the quills with age and season, render it exceedingly difficult to identify species; and we have probably much to learn yet, before our knowledge shall be complete on this subject. The common gull above described, although called the *Ring-billed Gull* in the books, has received no other popular name than *Brown Winter Gull*; although, as we have seen above, the adult has a white plumage. This would lead us to infer that the young, or at least the immature birds, are most numerous. The ring on the

bill is not always found. It breeds from Maine to the arctic circle, and ranges to Mexico during the winter. It occurs also along the shores of the Pacific. Allied to the *L. canus* of Europe, with which it has been frequently confounded.

THE LAUGHING GULL.

LARUS ATRICILLA.

PLATE CXXXII. FIGS. 289, 290 (MALE ADULT).—PLATE CXXXV. FIG. 296 (FIRST YEAR).

(STATE COLLECTION.)

Larus atricilla, LIN. p. 225. *L. ridibundus*, WILSON, Am. Orn. Vol. 9, p. 89, pl. 74, fig. 4.
L. id. ORD's reprint, p. 257. BONAPARTE, Obs. No. 246; Ann. Lyc. N. Y. Vol. 2, p. 359. NUTTALL, Man. Orn. Vol. 2, p. 291. AUDUBON, B. of Am. Vol 7, p. 136, pl. 443. GIRAUD, B. of Long island, p. 358.

CHARACTERISTICS. *Adult:* Bill robust, and (with the feet) dark red. Mantle slate-bluish ash. A black hood on the head, descending in front. Tarsus 2·0. *Young*, no hood; brown varied with rusty; a black subterminal band. Length, 16·0.

DESCRIPTION. Bill rather shorter than the head, freely curved from the base, 1·4 to 1·8 in length measured along the ridge. Mental angle with concave lines towards the tip and base. Tail nearly even, slightly double, forked, the middle and lateral feathers being longest; first and second quills subequal, longest.

COLOR. *Adult in summer:* Head, and a part of the neck all round, descending lower in front, bluish black. Eyelids with a narrow white band above and below. Bill and feet deep carmine red. Back and wings bluish grey. Ends of the secondaries and tips of the quills white. First five quills black towards the tips, grey at the base; the black gradually decreasing in extent. Sixth quill with one or two small black spots near the tip. Lower part of the neck, the tail and all beneath pure white: a rosy tint pervades this white, but is only apparent in recently killed specimens. *Winter, and in change:* Summit of the head, occiput, nape, space before the eyes, and an obsolete broad band across the breast uniform deep greyish brown. Upper part of the back brown, with narrow greyish crescents formed by the tips of the feathers. Quills and their shafts deep black, faintly tipped with whitish. Feathers of the tail pearl-grey at their base above, white beneath; the grey on the outer web of the external tail-feather reaching nearly to the tip: a broad black subterminal band, tipped with white on the sides, and rufous in the centre. Length, 15·0 – 17·0.

The *Laughing* or *Black-headed Gull* reaches the shores of this State from the south about the beginning of May, and rarely goes farther north along the coast, although it occurs in the interior and along the great lakes. It breeds from New-York to Florida. The eggs are drab, blotched and spotted with reddish brown, more numerous towards the larger end. Its extreme geographical range may be included between the twenty-sixth and forty-fourth parallels. Peculiar to America. Accidental in Europe.

BONAPARTE'S GULL.

LARUS BONAPARTII.

PLATE CXXXI. FIG. 287 (SUMMER), 288 (WINTER).

(STATE COLLECTION.)

Larus bonapartii. RICHARDSON, F. B. A. Vol. 2. p. 425, pl. 72 (summer). NUTTALL, Man. Orn. Vol. 2, p. 294. AUDUBON, B. of A. Vol. 7, p. 131, pl. 442 (male, female and young).
Xema id. BONAPARTE, Geog. and Comp. List, p. 62. KIRTLAND, Zool. Ohio.
X. id. GIRAUD, Birds of Long island, p. 259.

CHARACTERISTICS. Bill slender, black. Wings edged with white. Above pearl-grey. First quill black on the upper surface of its outer web. *Summer*, with a greyish black or brownish hood. *Winter* and *young*, without the hood. Length, 14·5.

DESCRIPTION. Bill slender, straight, notched at the tip; length along the ridge 1·3, and 0·3 deep at the very slight mental angle. Tail nearly even, slightly rounded. First quill longest.

COLOR. *Summer:* Bill black: feet reddish or orange-yellow. Back and wings above pearl-grey. The hood extending down the nape and throat, but not so far as in the preceding species: it is greyish black in the male, and reddish brown in the female. A small white spot partly surrounds the eye behind. First quill on its inner web, second on both webs, and inner webs of the third, fourth and fifth white; both webs of all ending in black, but tipped with white. Neck, breast, tail and tail-coverts above and all beneath pure white, occasionally with a faint rosaceous tint. *Winter:* Head and neck white, with a dark spot before the eyes and on the auriculars: nape pearl-grey. Chin, sides of the neck, rump, tail and all beneath white. First quill black on its outer web, except a small spot near the tip; both webs of the following, white, inclining to pearl-grey on the inner webs, black at their ends, and tipped with white; fifth quill pearl-grey on both webs, the black mark extending along the margin of the inner web, and, with the three following, tipped with grey, the black becoming subsequently obsolete. Mantle pearl-grey.

Length, 14·0 – 15·0.

This is a northern species, breeding from Maine to the arctic circle. In the winter it descends along the coast to Florida, and in the interior along the great lakes. It is one of the most common species on our coast. I am indebted to Professor James Hall for a beautiful specimen in its summer dress, shot April 29, in Schoharie creek, about thirty miles from Albany.

THE FORK-TAILED GULL.

LARUS SABINI.

PLATE CXXVIII. FIG. 281.

(COLLECTION OF H. C. DE RHAM.)

Larus sabini. SABINE, Linn. Tr. Vol. 12, p. 520, pl. 29. RICHARDSON, F. B. A. Vol. 2, p. 428.
Xema id. LEACH, Ross's Voyage, App. AUDUBON, B. of A. Vol. 7. p. 127, pl. 441 (male).
Larus id. NUTTALL, Man. Orn. Vol. 2, p. 296. GIRAUD, Birds of Long island, p. 362.

CHARACTERISTICS. Tail forked. Bill black, yellow at tip. First five quills bordered with white on their inner webs nearly to the tips. *Summer*, adult with a dark grey hood, margined beneath with black. Length, 13·0.

DESCRIPTION, from a specimen shot on the coast of New-York. Bill slender, 1·0 long, curved above, broadly notched near the tip, and the mental angle conspicuous. First and second quills subequal, longest. Tarsus compressed, 1·4 long: tibia with a small naked space below. Tail broadly forked or emarginate, of fourteen feathers.

COLOR. Bill and feet black, the former for more than half its length, and tipped with yellow, with a slight orange tint on the mental angle. Head and neck dark slate, margined beneath with black. Mantle pearl-grey. Anterior border of the wings, primary coverts, and the first five quills black: external covert immaculate; the succeeding ones tipped with white, and the concealed webs of the posterior feathers white. Primaries broadly margined on their inner webs with white nearly to their tips; the remaining quills, most of the secondary coverts, tips of the secondaries, tertials and scapulars, with the tail, neck and all beneath, pure white, tinted with rosaceous.

Length, 13·0.

The *Fork-tailed Gull* is but an occasional visiter to our shores, or at least has been but rarely observed. It breeds from Newfoundland to the Arctic seas. The eggs are olive-colored, blotched with brown. Found on both sides of the Atlantic.

THE KITTIWAKE, OR THREE-TOED GULL.

LARUS TRIDACTYLUS.

Larus tridactylus, LIN. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 359. RICHARDSON, F. B. A. Vol. 2, p. 423. AUDUBON, B. of A. Vol. 7, p. 146, pl. 444.
Rissa id. LEACH. BONAPARTE, Geog. and Comp. List, p. 62. GIRAUD, Birds of Long island, p. 361.

CHARACTERISTICS. Hind toe obsolete, and without nail. Mantle blue-grey. Quills mostly black at the point. *Summer adult:* head and neck pure white; bill yellow. *Young*, varied with greyish; bill black. Tail with a black subterminal band. Length, 17·0.

DESCRIPTION. Bill moderate, robust, decurved above, 1·5 long measured from above. Tibia bare beneath. A mere rudimentary knob occupies the place of the hind toe. First quill longest. Tail even, longer than the wings. *Summer:* Mantle bluish grey; bill greenish yellow; eyelids red; feet black; head, neck, rump, tail and all beneath pure white. *Winter* and *young*, darker above; the head and neck grey, with minute dark streaks, and darkish before the eyes and auriculars. In the young, the bill is black.

Length, 16·0 – 18·0.

This species is more abundant on the shores of Rhode-Island and Massachusetts than on this coast. It is a northern species, breeding from Maine towards the arctic circle. Eggs light olive-green, with numerous irregular spots of dark brown. It rarely occurs south of New-York. Common to both sides of the Atlantic.

(*EXTRA-LIMITAL*)

L. eburneus. (AUD. B. of A. Vol. 7, p. 150, pl. 445.) Pure white; bill yellow; feet black. Tarsus 1·6. *Young:* head and wings faintly streaked with brown; tips of the quills and tail dusky. Length, 19·0. *Newfoundland northwardly.*

L. leucopterus, BONAP. (AUD. B. of A. Vol. 7, p. 159, pl. 447.) Back, wings and upper surface of the quills bluish grey; all the remainder of the plumage pure white. Bill yellow-orange on the angle beneath. *Young:* bill yellow, tipped with black; brown streaks on the head, and short bars of the same on the back, wings and tail. Length, 26·0. *From New-York northwardly.*

L. occidentalis. (AUD. Ib. Vol. 7, p. 161.) Bill yellow. Back and wings greyish blue. Head, tail and all beneath white. Ends of the quills white; the remainder parts of the quills greyish black. Tarsus 3·0. *Young*, mottled with brown and greyish brown. Length, 27·0. Allied to *argentatus*. *Northwest coast of America.*

L. glaucus, BRUNN. (AUD. Ib. Vol. 7, p. 170, pl. 449.) Mantle, wings and tail greyish blue. Head and all beneath white. Bill yellow: feet flesh-colored. Tarsus 3·0. *Young:* bill black at tip. Color yellowish brown, spotted and barred above with dusky brown. Length, 30·0. *Labrador northwardly.*

L. franklinii. (RICHARDSON, F. B. A. Vol. 2, p. 424.) Bill and feet vermilion. Mantle pearl-grey. Five outer quills broadly barred with black; the first tipped with an inch of white. Hood black. All beneath white, tinged with rose-color. Length, 17·0.

L. minutus, Pall. (Nuttall, Man. Orn Vol. 2. p. 289.) Mantle pearl-grey. Quills white at the point; shafts blackish. Hind toe very small, with nail straight and scarcely apparent. *Summer*, a black hood. *Young*, spotted with grey and blackish. Tail somewhat forked, with a black subterminal band. Length, 10·5. *Rare in the northern regions. Common in Europe.*

GENUS LESTRIS. Illiger.

Bill moderate, cylindrical, hooked at the tip: ridge and tip in separate pieces. Nostrils towards the tip, oblique, narrow, pervious, closed behind by the cere. Feet slender. Hind toe small, on a level with the others. Nails strong, much incurved and very acute. Tail even or rounded; the central pair much elongated.

THE ARCTIC HAWK-GULL.

Lestris buffoni?

PLATE CXXXIII. FIG. 291.

(COLLECTION OF W. COOPER.)

Description. Bill straight, abruptly curved and notched at the tip, 0·9 long, as broad as high at the base: lower mandible obliquely truncate and scolloped: mental angle prominent. Wings 11·0; the first quill longest. Tail somewhat rounded, of twelve feathers; the rounded lateral ones truncated, especially on their inner webs. Beside the long and wide central pair, there is an additional pair still longer and filamentous. The shortest central pair 0·7 longer than the lateral ones, broad, very slightly tapering, and truncated at the tips. The filiform pair are 2·0 longer than the preceding, 0·2 broad in the widest part, and tapering into narrow thread-like filaments, with a total length of 7·5. Tarsus apparently light greenish, 0·6 long, with smooth plates in front and small rough scales behind. Toes and webs with jet black minute scales.

Color. Base of the bill apparently greenish; the tip black: lower mandible with a reddish tinge towards the base. There appears to have been also a difference in the color of the hind toe and nail of each foot; one being reddish and the other jet black. Frontlet, crown, occiput, and a space before and beneath the eyes to the rictus, deep blackish brown. Chin and upper part of the throat white. Sides of the head, and around the neck, white with a tinge of yellow. Back and all above dark slate. Quills, secondaries and tail brownish black: upper and under tail-coverts broadly barred with white and brown. Upper part of the breast varied with white and brown. Flanks, axillaries and vent barred with white and brown: centre of abdomen dull brown. Length, 15·0.

I refer this with much doubt to *L. buffoni*, which is said to be only accidental in America; and, indeed, in my previous report, had indicated it under the name of *dubius*. It is very distinct from that and all other species, by the comparative shortness of its bill, and the presence of four elongated tail-feathers. It would be improper, however, in the present imperfect state of our knowledge, to erect it into a new species.

RICHARDSON'S HAWK-GULL.

LESTRIS RICHARDSONII.

PLATE CXXXIV. FIG. 293.

(STATE COLLECTION. CABINET OF H. C. DE RHAM.)

Lestris richardsonii. SWAINSON, F. B. A. Vol. 2, p. 433. AUDUBON, B. of Am. Vol. 7, p. 190, pl. 452.
S. id. NUTTALL, Man. Orn. Vol. 2, p. 319. GIRAUD, Birds of Long island, p. 367.

CHARACTERISTICS. Blackish brown. Neck straw-yellow. Bill broad at the base. Tarsus 1·6. Beneath light colored. Central tail-feathers gradually tapering to a point. Length, 16·0.

DESCRIPTION. Bill straight, 1·2 long measured from above, 0·5 broad at the base. Tips of the tail-feathers as if truncated; the shafts slightly projecting beyond the webs. *Adult male:* Bill bluish black: legs black. Sooty brown above. Summit of the head dusky. Quills and tail brownish black: shafts of the quills white. *Young:* Bill and feet bluish; outer portion of the webs blackish. Sooty brown above; the feathers tipped with whitish. Breast, sides, under wing and tail-coverts barred with dusky brown. There are, we suspect, many variations in the plumage, which it may be well to describe, in order to elucidate the history of this species. In the four specimens before me, from the Cabinet of the Lyceum, of H. C. De Rham, and the State Collection, all of which I suppose, from the tarsus, the conformation of the bill and tail, to be referable to this species, I note the following variations:

No. 1, from Mr. De Rham's Collection: Of a nearly uniform sooty brown. Head beneath the plane of the eyes, neck above and below, straw-yellow: frontlet light colored. Tarsus black. Central pair of tail-feathers 8·0 long.

No. 2, *State Collection*: Crown, back, rump and all above brown: tips of quills and tail-feathers darker; the long subulate feathers on the nape and sides of the neck yellow. Throat and upper part of the breast with an obscure brownish band, darkest on the sides. Flanks distantly barred with brown. Axillaries barred with white and rufous. Lateral and under tail-coverts barred with brown and rufous. Tarsi black: on one of them a broad yellowish band (as in *pomarinus*) below the tibia.

No. 3, *Coll. De Rham:* Resembles generally the preceding, but the broad belt across the breast darker and more distinct. Centre of the abdomen pure white. Traces of the yellow band on one of the tarsi.

No. 4, *same collection:* The straw-yellow on the sides of the head brighter. Axillaries, vent, upper and under tail-coverts plain brown. Frontlet with a tinge of yellow.

I cite no history of this species, and I am unacquainted with its habits. They appear on the coast of this State in winter. They are northern birds, breeding in the interior near the arctic circle.

THE POMARINE HAWK-GULL

LESTRIS POMARINUS.

PLATE CXXXIII. FIG. 292 (IMMATURE).

Lestris pomarinus. TEMMINCK, Man. d'Orn. Vol. 2, p. 793. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 364.
L. id. NUTTALL, Man. Orn. Vol. 2, p. 315. AUDUBON, Birds of Am. Vol. 7, p. 186, pl. 451 (female).

CHARACTERISTICS. Tarsus 2·0. A broad dusky band, more or less distinct, over the breast. Central tail-feathers wide to the tips, where they are rounded. Length, 18·0.

DESCRIPTION. *Adult:* "Front, crown and occiput, back and wings uniform dark brown; feathers of the neck long and yellowish; throat, fore part of the neck and belly white: on the breast a wide collar, formed by broad spots. Length, 15·0 – 16·0" (*Temminck*).

A yearling in the State Collection: Bill 1·1 measured from above, 0·3 wide at base. Tarsus 1·8. Tail nearly even; the outer feather somewhat longer than the adjacent one; the central pair broad, subacuminate, 0·7 longer than the others. *Color:* Crown brown varied with rufous; the occiput darker: a deep crescent-shaped black spot before the eyes: corners of the mouth dark brown. Back and wing-coverts dark brown; the feathers tipped with rufous. Outer webs of the quills deep black, and tipped with rufous: in some lights, the outer web of the first quill appears to be slate-colored. Shafts white, except at the tips; the base of all the quills white, more or less tinged with reddish. Upper tail-coverts with broad angular bars of rufous, tipped with brown: lateral tail-feathers tipped with whitish. Chin rusty white. Throat whitish, streaked with brown; lower part of the throat dusky, barred with brown and reddish: sides and vent barred with the same, the rufous tint becoming more pronounced. Underside of the wings, and the long axillary feathers light rufous, with angular brown bars. Legs and feet yellowish; outer part of the web dark colored or black. Length, 17·5.

In the collection of my friend W. Cooper, is a specimen younger I think than the one just described, and presenting the following variations: The whole head and neck light rufous, faintly striped with brown. Quills and secondaries tipped with reddish, passing into white. A broad bar of reddish or cream on the outer webs of the first six quills: inner webs white to within a short distance from the tips. The same black crescent-shaped eye-mark, bill, feet, etc.

In the Cabinet of the Lyceum is another, with the crown brown, streaked with greyish; occiput, nape and sides of the neck light straw-yellow, finely streaked with brown; chin and abdomen white, immaculate; throat with interrupted pointed brown dots or streaks, slightly tinged with rufous; breast and sides barred with brown; rump and upper and under tail-coverts with interrupted brown bars, which are bordered with rufous; quills and tail-feathers

white at base, then reddish, passing into brown; tarsus uniform black. In the Collection of H. C. De Rham is another, with more of a rufous tinge about the neck, and distinct brown arrowheaded marks on the fore part and sides of the neck; breast deep brown, with still deeper brown bars; beneath densely barred with brown; tarsi apparently black, varied with yellow.

The difficulty of capturing these birds, and their consequent rarity for the purpose of examination and comparison, has hitherto prevented us from being fully acquainted with their history. It is not clear to me that the characters upon which specific distinctions have been attempted to be founded among the birds of this genus are always to be relied on. Among nine individuals now lying before me, belonging to two if not to three species, I do not detect more than 0·2 of an inch difference in the length of the tarsi. The length and perhaps the shape of the central tail-feathers must vary with age.

This species is not uncommon on our coast in winter. Mr. Audubon, however, states that he has never seen this species along the shores of the United States, although some of the genus go as far south in winter as the Gulf of Mexico. The Prince of Canino asserts of another (*L. buffoni*, Boié; *L. parasiticus*, Linnæus), that it is only accidental in North America; so that possibly all the Gull-hawks or Yagers on the coast of the United States may eventually be referred to one and the same species.

FAMILY ANATIDÆ.

Bill straight, stout, more or less depressed, covered with a thin membranous skin; its edges furnished with lamellar teeth, or with small denticulations; the tip rounded and obtuse, furnished with a nail. Wings moderate. Legs placed in or near the equilibrium. Feet four-toed, palmated: hind toe free, placed high on the tarsus. Tibia almost entirely feathered. Tail various, usually short, composed of from twelve to twenty feathers. Plumage dense.

GENUS MERGUS. Linnæus.

Bill moderate, depressed, straight, slender, nearly cylindrical, tapering, armed at the tip with a strong hooked nail; the edges furnished with oblique acute teeth directed backwards. Nostrils nearly medial, lateral, very small and pervious. Tarsi compressed. Hind toe furnished with a broad membrane. Head crested. Tail short, rounded, of sixteen or eighteen feathers.

THE BUFF-BREASTED SHELDRAKE.

MERGUS MERGANSER.

PLATE CXIX. FIG. 264.

Mergus merganser, LINNÆUS, p. 208 (male); *caster*, p. 209 (female).
Goosander. PENNANT, Arct. Zool. Vol. 2, p. 537.
M. merganser. WILSON, Am. Orn. Vol. 8, p. 68, pl. 63, fig. 1 (male); fig. 2 (female). RICHARDSON, F. B. A. Vol. 2, p. 461. BONAPARTE, Ann. Lyc. Vol. 2, p. 397. AUDUBON, B. of A. Vol. 6, p. 387, pl. 411. GIRAUD, Birds of Long island, p. 339.

CHARACTERISTICS. Mirror white uninterrupted; bill and feet red; nostrils medial. *Male*, black; neck and beneath white; head tufted, purplish green. *Female*, cinereous; beneath white; head rufous, tufted. Length, 26·0.

DESCRIPTION. Upper surface of the bill somewhat flattened; height and breadth at base subequal. Teeth triangular, acute, pointed backwards. Bill, measured from the frontlet, 2·2. Feathers on the neck and head elongated, about 1·0 long. Tarsus compressed, 1·8 long. Inner secondaries elongated, tapering. Tail short, much rounded, of eighteen feathers: upper tail-coverts long.

COLOR. *Male:* Head and half the neck black, with glossy green reflections, more particularly on the nape. Lower part of the neck, ends of the greater coverts, external scapulars, and all beneath of a beautiful cream-yellow or buff, which fades to white in cabinet specimens. Back, scapulars, humeral wing-coverts, spurious wing, narrow borders of the tertials and quills black. Lower part of the back, rump, upper tail-coverts and tail ash: sides of the rump white, waved with grey. *Female:* Crest more developed than in the male, brownish red. Chin and throat pure white: lower part of the throat in front, sides of the breast and flanks barred with grey and white. Beneath yellowish white. Above deep ash. Outer webs of six of the secondaries, and tips of the coverts white, forming a large mirror. *Young of the year*, resembling the female. *Young male of the second year* (fig. 264): The white throat and rufous neck becomes spotted with black: a streak of the same appears over the eye. All above bluish ash; the feathers darker in their centres. Quills and anterior secondaries black; the coverts overlying the secondaries, black, broadly barred with white and tipped with black, forming a dusky bar across the mirror. Beneath salmon or buff; the flanks slate margined with whitish. Length, 26·0–28·0.

This large species is known on our coast under the names of *Sheldrake*, *Sawbill*, and *Dun Diver*. In Europe it is called the *Goosander*. It breeds throughout the interior from Pennsylvania northwardly. It appears along the coast in the autumn, and remains until late in the winter, and some may be seen throughout the winter. The female is thought by our sportsmen to be a distinct species, and is called *Weaser*, or *Swamp Sheldrake*. The eggs are pale olive-white, tinged with buff. Its food consists of fish, aquatic reptiles, shells, crayfish, etc. Its geographical range extends from Mexico to 68° north latitude. Common on both sides of the Atlantic.

THE RED-BREASTED SHELDRAKE.

MERGUS SERRATOR.

PLATE CXX. FIG. 266.

(STATE COLLECTION.)

Mergus serrator, LINNÆUS, p. 108. *Red-breasted Merganser*, PENNANT, Arct. Zool. Vol. 2, p. 537.
M. id. WILSON, Am. Orn. Vol. 8, p. 91, pl. 69, fig. 1 (male). BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 397. AUDUBON, B. of A. Vol. 6, p. 395, pl. 412 (male and female). RICHARDSON, F. B. A. Vol. 2, p. 462. NUTTALL, Man. Orn. Vol. 2, p. 463.

CHARACTERISTICS. Mirror white, crossed by one or more black bars; bill and feet red; nostrils sub-basal: a long slender pendant crest. *Male*, black; lower part of neck and beneath white; head and crest purplish green. *Female*, ash brown; head and crest reddish brown. Length, 24·0.

DESCRIPTION. Bill toothed as in the preceding, slender, 2·0 long measured from above the tip, very abruptly curved down: nostrils near the base, linear, pervious. Occipital crest composed of linear elongated feathers, some of which are 2·5 long. Tarsus robust, compressed, 1·8 in length: margins of the webs deeply concave, that of the hind toe extending beyond the nail. Tail short, rounded, and composed of eighteen slightly pointed feathers. *Male:* Sides of the head and neck glossy green. Remainder of the head, the chin, half of the throat, line on the back of the neck, the back shoulders, scapulars and edges of the tertials black. Lower part of the neck, coverts of scapulars, ends of greater coverts, secondaries, tertials and all beneath white. Breast and sides of the neck reddish varied with black. Flanks, rump, and upper tail-coverts white, minutely waved with black. Bill and feet red. *Female:* Head, neck and crest dull rusty or reddish brown: throat white; fore part of the neck and breast varied with white and ash grey; above dark ash; mirror with one bar. This, and the form of the line of junction of the feathers with the bill, are the chief distinctive marks between this and the female of the preceding species. *Young of the year:* Head deep brown; throat greyish white; bill pale red.

Length, 23·0 – 25·0.

This species is also called the *Sawbill*, *Whistler*, and *Pied Sheldrake*, in this State. It breeds in the interior of the State, and generally throughout the Union. The eggs vary from six to eight, of a uniform dull yellowish color. It occurs on the Columbia river, and has the same geographical range with the preceding. It is found in Europe and America.

THE HOODED SHELDRAKE.

Mergus cucullatus.

PLATE CXX. FIG. 265.

Mergus cucullatus, Linnæus, p. 207. *Hooded Merganser*, Pennant, Arct. Zool. Vol. 2, p. 538.
M. id. Wilson, Am. Orn. Vol. 8, p. 79, pl. 69, fig. 1. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 397. Audubon, B. of A. Vol. 6, p. 402, pl. 413. Nuttall, Man. Orn. Vol. 2, p. 465. Giraud, Birds of Long island, p. 341.

Characteristics. Bill blackish red; feet dusky; a large circular compressed crest. *Male*, black; beneath white; crest black; white on each side behind. *Female*, sooty brown; beneath white; crest rusty ash, without the white. Length, 18·0.

Description. Bill short, deeper than broad at the base; the teeth about twenty-five, not conical: transverse furrows on the palate. Crest large, erect, compressed, semicircular, extending from the forehead to the occiput. Tarsus 1·2 in length. Tail short, subacute, of sixteen feathers.

Color. *Male*, a triangular white patch extending from the eye to near the edge of the crest on each side: remainder of the crest, including the tips of all the feathers, greenish black. Bill blackish: feet greenish yellow. Sides and summit of the head, neck, bars on the shoulders, back, scapulars and tertials greenish black; tips of the greater coverts, outer edges of the secondaries and all beneath white; flanks reddish, minutely waved with black. *Female:* Forehead, sides of the head and all the neck dark ash. Crest shorter, and of a uniform reddish brown. All above dark brown, with a tinge of ash, and minutely barred with black. *Young*, no black bars on the shoulders, nor white on the scarcely visible crest. Head, neck and breast pale brown, edged with paler.

Length, 17·5 – 19·0.

The *Hairy-head*, or *Whistler*, or *Water Pheasant*, as this species is called in this State, is not as common on the seacoast as either of the two preceding, but is more confined to the interior. It breeds from Carolina, through the interior along the great lakes, to high northern latitudes. It is said to range from 24° to 68° north latitude, and to occur only accidentally in Europe. Its eggs, food and habits, like the preceding.

(*EXTRA-LIMITAL.*)

M. albellus, Lin. (Aud. Ib. Vol. 6, p. 408.) Mirror black crossed with white. Bill and feet bluish. Tail of sixteen feathers. *Male*, white varied with black; crown white: a short band on each side of the hind neck bordering the crest, deep green. *Female*, cinereous; beneath white; crest reddish brown. Length, 17.5. *Accidental in America.*

GENUS FULIGULA. Ray. Stephens.

Bill broad, depressed, not of equal breadth throughout, somewhat dilated, curved and unguiculated towards the tip. Head large and thick. Tarsus robust, much compressed, shorter than the middle toe. Hind toe with a lobed membrane.

Obs. This genus comprises the *Sea Ducks*, as they are called (although they are occasionally seen in the interior), in order to distinguish them from the fresh-water ducks. The Duck family proper forms a very natural group, which at first sight it would appear very difficult to separate. We have, however, the twenty-six ducks found in America arranged under sixteen or eighteen genera, according to the views of systematists. We shall content ourselves with indicating some of these divisions, without elevating them to the rank of genera.

(1.) *Bill long, broad and flat, dilated at the end. Tail short, of fourteen feathers.* Fuligula.

THE CANVASS-BACK.

Fuligula valisneria.

PLATE CXV. FIG. 256.

(STATE COLLECTION.)

A. valisneria. Wilson, Am. Orn. Vol. 8, p. 103, pl. 70, fig. 1. Bonaparte, Ann. Lye. N. Y. Vol. 2, p. 392. Richardson, F. B. A. Vol. 2, p. 451. Nuttall, Man. Ornith. Vol. 2, p. 430. Sharpless, Cab. of Nat. History, Vol. 1, p. 41. Audubon, B. of A. Vol. 6, p. 299, pl. 395 (male and female). Giraud, Birds of Long island, p. 318.

Characteristics. Mirror grey. Bill straight, nearly 2·5 long; its sides parallel. Irides red. *Male*, white waved with black; head tinged with black before, and with the neck glossy chesnut: a black pectoral belt. *Female*, dull whitish waved with brown; head, neck and breast brownish. Length, 21 inches.

Description. Bill deeper than broad at the base, where it is very high. Nostrils submedial, large, near the ridge, and placed in a furrow covered with a membrane. Tarsus scarcely half the length of the middle toe. Tail-feathers pointed.

Color. *Male:* Irides red. Bill greenish black. Forehead and throat dusky. Head and neck glossy chesnut red. A broad band of brownish black occupies the lower part of the neck and breast. Above greyish white, with numerous minute undulating bars of black.

Rump and upper tail-coverts blackish. Quills and secondaries slate-grey. Beneath white; the sides tinged with dusky. Vent and lower tail-coverts blackish brown. Feet bluish. *Female:* Head, neck and breast dull reddish brown; upper parts dark greyish brown; sides and abdomen the same. Rather smaller than the male.

Length, 20·0–22·0.

The *Canvass-back Duck* breeds on the Rocky mountains and in high northern latitudes, but its history is as yet incomplete. It appears on the seacoast of the United States about the beginning of November, and at that season extends from the 29th to the 40th degree of north latitude, or between the shores of Long island and the mouth of the Mississippi. They occur but sparingly in the Hudson river, and along the shores of this State. Their chief food consists of the *Zostera valisneria*, an aquatic plant growing in brackish water; and when the supply is abundant, their flesh is justly prized by epicures as superior in flavor to every other water-fowl. It is a species worthy to be domesticated, and I am informed that attempts are now being made to effect this desirable object.

THE RED-HEAD.

FULIGULA ERYTHROCEPHALA.

Pochard Duck. PENNANT, Arct. Zool. Vol. 2, p. 560.
A. ferina. WILSON, Am. Orn. Vol. 8, p. 110, pl. 70, fig. 6.
Fuligula ferina. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 392. AUDUBON, B. of Am. Vol. 6, p. 311, pl. 396 (male and female). NUTTALL, Man. Orn. Vol. 2, p. 434.
Aythya erythrocephala. BONAPARTE, Geog. and Comp. List, p. 58.

CHARACTERISTICS. Mirror grey; Bill and feet bluish; irides yellow. *Male*, ash, thickly waved with black lines; head and upper part only of the neck wholly chesnut: a broad black pectoral band. *Female*, wholly brown; forehead and cheeks tinged with red. Length, 19·0.

DESCRIPTION. Bill about 2·4, slightly dilated at the tip, concave along its upper ridge. The middle toe nearly double the length of the tarsus.

COLOR. *Male:* Irides orange-yellow. Bill and feet bluish; the former blackish at the tip. Head and neck brownish red or chesnut. Lower part of the neck, and anterior portion of the body, brownish black, extending on the fore part of the back. Back greyish brown, barred with minute white lines. Quills brownish grey: secondaries ash-grey, narrowly tipped with white. Tail-feathers greyish brown, lighter at the base. Beneath, abdomen white; darker towards the vent, where it is barred with undulating dusky lines. *Female*, smaller. Head and upper part of the neck dull brown, tinged with red, which is more obvious on the forehead, cheeks, and a streak behind the eye. Upper parts dull greyish brown. Flanks and fore part of the neck dull reddish brown, obscurely mottled with darker. Abdomen white.

Length, 18·0–20·0.

The *Red-head*, as it is usually called, breeds in high northern latitudes. It reaches the coast of this State in November, and may be seen here during the whole winter. It is not as common as the preceding, which it closely resembles, and with which it is frequently confounded even by epicures. In flavor it is scarcely inferior to the Canvass-back, from which it may be at once distinguished by the shape of its bill and the color of its eyes. It ranges from Massachusetts (according to Dr. Brewer) to the Mississippi. It has hitherto been confounded also with a closely allied species, the *Pochard* (*F. ferina*) of Europe. From this it has lately been separated by the Prince of Canino, as a distinct American species.

THE BROADBILL.

FULIGULA MARILA.

PLATE CXIV. FIG. 252.

Anas marila, LIN. p. 196. *Scaup Duck*, PENNANT, Arct. Zool. Vol. 2, p. 565.
A. id. WILSON, Am. Orn. Vol. 8, p. 84, pl. 69, fig. 3.
Fuligula id. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 392. NUTTALL, Man. Ornith. Vol. 2, p. 437. GIRAUD, Birds of Long island, p. 321.

CHARACTERISTICS. Mirror white, on the quills and secondaries. Bill very broad. No crest. *Male*, glossy black; scapulars minutely waved with white. *Female*, brown; near the bill, whitish. Length, 19·0.

DESCRIPTION. Bill broad, enlarged and flattened towards the end, 2·3 long.

COLOR. *Male:* Head, neck, breast and fore part of the back black, glossed with green on the sides of the head and neck, and tinged with purple. Beneath white, undulated with black towards the vent. Rump and upper tail-coverts dusky brown. Back varied with undulating bars of white. The white mirror crosses the secondaries and inner primaries. Bill greyish blue, blackish at the tip. Wings brownish grey. *Female:* Head, neck and fore part of the breast reddish brown: a broad white patch on the forehead. Upper parts brownish black; lower part of the breast and the abdomen white; the middle of the back and the scapulars obscurely undulated with whitish.

Length, 19·0 – 19·5.

This species breeds in high northern latitudes, and appears on our coast about the beginning of October in large flocks. It remains here late in the winter, and returns again in the spring on its northwardly migration. It is only known on this coast under the name of *Broad-bill*, and more rarely *Blue-bill*. On the Chesapeake, according to Mr. Giraud, it is called *Black-head*, and in Virginia *Raft-duck*. It is highly prized by epicures on this coast; and indeed, when in good condition, is scarcely inferior to the Canvass-back. It is common to Europe and America.

THE CREEK BROADBILL.

Fuligula minor.

Fuligula marila. Audubon, Birds of America, Vol. 6, p. 316, pl. 397 (male and female).
F. minor. Giraud, Birds of Long island, p. 323.

Characteristics. Closely allied to the preceding. Mirror white, and restricted to the secondaries alone. Head subcrested. Length, 17·0.

Description. Bill broad and flattened as in the preceding, 2·0 long. Tarsus 1·13. Head with its feathers more elongated.

Color. Head and neck deeply tinged with purple. In all other respects, the markings in both sexes are so nearly identical with the preceding as scarcely to be distinguished.

Length, 17·0.

The sportsmen on the seacoast of New-York have long been accustomed to consider as distinct two kinds of *Broadbill*, which they term the *Black-headed* or *Big Broadbill*, and the *Green-headed* or *Little Creek Broadbill*. It is this latter which has been well described by Mr. Audubon, but referred to the larger species.

Several eminent ornithologists have been struck by the great discrepancy in the dimensions assigned to the Broadbill, varying no less than from 16·5 to 20 inches; but, until recently, no one has suspected that they might possibly be two closely allied species. Mr. Audubon, who is very familiar with these birds, appears to entertain the opinion that this is but a mere variety of the preceding; at least he will not pronounce it to be specifically distinct.*

I have received, through the attention of Mr. Bell, many specimens of this *Creek Broadbill*, and agree with him and Mr. Giraud in considering it as distinct from the *F. marila*. It is very common on the coast of this State, appearing simultaneously with the larger broadbill; and it appears to prefer the creeks and smaller streams of the interior, while the large broadbill is usually seen in the open bays. Mr. Audubon describes this species (*F. minor*) as abundant during autumn on the Ohio and its tributaries, as well as those of the Missouri and Mississippi. Its history is yet incomplete.

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* Whilst these pages are passing through the press, I perceive that Mr. Audubon has found a species identical with the above, described by Mr. Vigors in the appendix or illustrations of Beechy's Voyage, a work which I regret not being able to find in any of our libraries. Mr. Vigors has described it under the name of *mariloides*, and Mr. Audubon no longer hesitates to adopt it as a new species.

THE BASTARD BROADBILL.

Fuligula rufitorques.

PLATE CXV. FIG. 255.

Anas fuligula. Wilson, Am. Orn. Vol. 8, p. 60, pl. 67, fig. 5 (male).
Fuligula rufitorques. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 393. Nuttall, Man. Orn. Vol. 2, p. 439.
F. id., Ring-neck Duck. Audubon, Birds of Am. Vol. 6, p. 320, pl. 398 (male and female). Giraud, Birds of Long island, p. 324.

Characteristics. Mirror bluish ash; chin white: a bluish white band across the bill. *Male*, black; belly whitish; sides waved with grey: a chesnut collar. *Female*, glossy brownish; face and belly white: very similar to female of preceding. Length, 17·0.

Description. Bill broad, subequal in depth and breadth at the base, shorter than the head, about 2·0 long; sides of the tip linear; the end in front of the band, pitted; the descending central part of the frontlet rounded, not pointed. Feathers of the head narrow, 1·0 long, and capable of erection into a subcrest. Tarsus short, rather rounded, 1·3 long, somewhat exceeded in length by the middle toe. Tail very short, broad, and of sixteen feathers.

Color. *Male:* Bill black; at the base, its margin, and a band over the tip light blue. Head and upper part of the neck black, with deep purple reflections; a broad brownish red ring surrounding the neck. Breast, back-coverts, tertials, vent and under tail-coverts black glossed with green: lesser coverts, quills and tail dark brown. Secondaries slate, narrowly tipped with white. Beneath whitish, finely sprinkled and waved with brown, becoming white as it ascends before the wings, and gradually more dusky towards the vent. A triangular white spot at the base of the lower mandible. *Female*, with the band across the tip of the bill, and the neck-collar, indistinct: resembling the female of *F. marila*, but the flat triangular space near the base of the bill larger: breast brownish white; back blackish brown.

Length, 16·0 – 18·0.

We are indebted to the Prince of Canino for our first positive knowledge of this as a distinct species. It had previously been confounded by Wilson with the *cristata* (*A. fuligula*, Linnæus) of Europe. The complete history of its incubation and migrations is yet to be learned. It is said to breed in high northern latitudes. On the coast of this State, it appears in the autumn and spring, and in the interior is noticed during the whole winter. It extends along the coast in its winter migration southwardly from Massachusetts to Mexico. Peculiar to America.

THE PIED DUCK.

FULIGULA LABRADORA.

PLATE CXVI. FIG. 258.

(STATE COLLECTION. CABINET OF THE LYCEUM.)

Anas labradora, GM. PENNANT, Arct. Zool. Vol. 2, p. 559. WILSON, Am. Orn. Vol. 8, p. 91, pl. 69, fig. 6 (male). *Fuligula id.* BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 391. AUDUBON, B. of Am. Vol. 6, p. 329, pl. 400 (male and female). NUTTALL, Man. Orn. Vol. 2, p. 428. *Camptorhynchus*, BONAPARTE, Comp. List. *F. grisea.* LEIB, Ac. Sc. Vol. 8, p. 170 (young).

CHARACTERISTICS. Mirror white and broad. Bill membranous at tip; the cere-like base and posterior margins orange. *Male:* head, neck, breast, scapulars, wing-coverts and secondaries white; crown, collar, and all the remaining parts black. *Female*, slate grey; sides of the forehead white. Length, 19·0.

DESCRIPTION. Bill broad, robust, rather wider than broad at the base, 1·6 in length, and not as long as the head: edges of the upper mandible soft, and turned over; the tip finely denticulate: lamellar teeth of the lower mandible largest. A distinct furrow surrounds the nostrils, and terminates in a point in the centre of the upper mandible. Tarsus 1·5 long; nails acute and recurved. Tail pointed, of sixteen acuminated feathers. Sides of the face and auriculars with yellowish bristly feathers.

COLOR. *Male:* Base of the bill pale orange; the remainder black. Irides hazel. Feet light bluish, with darker webs. An elongated black stripe on the crown and hind head. Rump and upper tail-coverts black, finely sprinkled with grey. Beneath brown, passing into black with age. On the lower part of the neck is a black ring, dilated behind, and uniting below with the black of the back: the black of the lower parts rises high up on the breast. Upper wing-coverts and secondaries white: quills brownish black. Tail-feathers, with the shafts, brownish black. *Female:* Head, chin and neck ashy grey; above slate blue: secondaries only white. *Young*, a crescent-like band of cream-color beneath and behind the eye; plumage grey, inclining to fuscous.

Length, 18·0 – 20·0.

This Duck, well known on this coast under the name of *Skunk-head*, and *Sand-shoal Duck* on the coast of New-Jersey, is not, however, very abundant. It presents characters which unquestionably form the type of a new group, and which has been furnished with an appropriate name by the Prince of Canino. It may possibly breed in high northern latitudes on the western shores of America, but this has not yet been confirmed. On the Atlantic coast, it has been noticed from Labrador to the Chesapeake bay. Its history incomplete, but as far as known, it is peculiar to America.

(2.) *Tail long, pointed, of eighteen feathers: no evident tail-coverts.* GYMNURA.

THE RUDDY DUCK.

FULIGULA RUBIDA.

PLATE CXVIII. FIG. 261.

(STATE COLLECTION. CABINET OF THE LYCEUM.)

Anas rubida. WILSON, Am. Orn. Vol. 8, p. 125, pl. 71, figs. 5 and 6.
Oxyura id. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 390.
Gymnura id. NUTTALL, Man. Orn. Vol. 2, p. 425. AUDUBON, B. of A. Vol. 6, p. 324, pl. 399.
Erismatura id. BONAPARTE, Geog. and Comp. List.
F. id. SABINE, Franklin's Journey. RICH. F. B. A. Vol. 2, p. 455. GIRAUD, Birds of Long island, p. 327.

CHARACTERISTICS. Mirror none: nostrils linear, small. Tail-feathers concave above. *Male*, reddish brown; crown, front and nape bluish black; sides of the head and chin white. *Female*, blackish, minutely sprinkled with whitish; crown darker; sides of the head dusky and whitish. Length, 15·5.

DESCRIPTION. Bill large, broad, 1·6 long, and dilated towards the end to 0·9; the feathers of the frontlet descending lowest in the centre: tip minutely serrate on its margin. Nostrils small, medial, contiguous. Wings very short, 5·5. Tarsus 1·4. Tail short, graduated, of eighteen pointed feathers; the shafts extending beyond the webs.

COLOR. *Male*, shot April 2: Crown deeply intermixed with rufous; chin and sides of the head white; throat dark ashy brown; anterior part of the breast of a scorched chesnut-color; abdomen yellowish white; all the parts beneath polished, the feathers setaceous. Sides of the body barred with reddish brown and dusky. Back and wing-coverts brown, intermixed with bright chesnut (sometimes of a uniform bright chesnut). Tail dusky yellowish on the outer webs, darker on the inner: axillary feathers white, brown at the base. Length, 16·0. *Female*, shot November 7: Crown and nape rufous, minutely barred with black; beneath glossy yellowish white; above brown, barred and sprinkled with rufous and grey; tail dark brown; chin and throat greyish white. *Young*, barred with reddish brown and black: a light grey streak from the base of the bill, passing under and behind the eye.

Length, 15·0 – 16·0.

The *Dun-bird*, *Looby* or *Dun Diver*, is rather rare on the coast of this State. It is a boreal species, breeding in high northern latitudes, descending along the whole coast of the United States in the winter, and penetrating into the interior. It is frequently called the *Saltwater Teal*. Its food consists of marine and freshwater plants and seeds, and its flesh is said to be very savory. Its history yet incomplete.

(3.) *Tail very long and tapering, of fourteen feathers: bill short and high at the base, suddenly contracting towards the tip; nostrils large.* HARELDA.

THE OLD-WIFE.

FULIGULA GLACIALIS.

PLATE CXIX. FIG. 263.

(STATE COLLECTION.)

Anas glacialis, LINNÆUS, p. 203. *Long-tailed Duck*, PENNANT, Arct. Zool. Vol. 2, p. 566.
A. id. WILSON, Am. Orn. Vol. 8, p. 93, pl. 70, fig. 1 (winter male); fig. 2 (female). NUTTALL, Man. Orn. Vol. 2, p. 453.
F. (Clangula) id. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 395. AUDUBON, B. of A. Vol. 6, p. 379, pl. 410 (male, female and young).
Harelda id. RICHARDSON, F. B. A. Vol. 2, p. 460. GIRAUD, Birds of Long island, p. 339.

CHARACTERISTICS. Mirror brown; a greyish space around the eye. *Male*, varied with black and white; middle tail-feathers excessively long: *winter*, head and neck white; scapulars pearl-grey. *Female*, dusky brown; throat and collar ash grey; crown blackish: *winter*, beneath white. Length, 19 inches, excluding the tail-feathers.

DESCRIPTION. Bill short, compressed, 1·5 long, higher than broad at the base, depressed towards the end: feathers of the frontlet but slightly advanced; tip short, robust, rounded: teeth above and below subequal. Nostrils broad, basal. Central pair of tail-feathers in the male 7·0–8·5 long, linear for two-thirds of their length; the lateral ones very acute. Tarsus 1·4: web of the hind toe passing beyond the nail.

COLOR, varying with age, sex and season. *Male in winter:* Bill black, with a broad band of yellowish; the tip dark grey or dusky. Frontlet and cheeks, including the eye, brownish drab, passing into a large blackish patch on each side of the neck, which is itself bordered beneath with reddish drab. Summit of the head pale yellowish. Chin, the back and front of the neck, abdomen, vent and under tail-coverts white; upper part of the back, scapulars, tertials and flanks pearl-grey. A triangular space on the back, together with the rump, upper tail-coverts and wing-coverts, black: secondaries reddish brown. Breast and quills brownish black. *Summer*, a space on the base of the neck above, and broad margins of the scapulars and tertials, bright chesnut; neck black, mottled in front with white; sides of the face soiled drab; centre of the rump black. *Female in summer:* Sides of the face, and spot on the throat, soiled white; summit of the head, and a large space on the sides of the neck, dark ash; nape, front and lower part of the neck, the vent and abdomen pure white. *Winter*, centre of the crown, and a spot on the neck, blackish; beneath pure white; above, the back, scapulars and lesser wing-coverts bright rusty; inner vanes of all but the two middle feathers white. *Young*, resembling the female in summer plumage.

Length, 18·0–20·0, excluding the tail.

The *Old-wife*, or *Old-squaw*, is one of the most common and least valued of the genus. They appear on our coast in the autumn in immense flocks, and almost cover the surface of our bays in the coldest and severest weather during the winter. They breed from Labrador to the Polar sea. In the autumn they descend along the Atlantic coast, and are resident during the winter from Maine to Mississippi. It occurs also along the coast of the Pacific, and is common to America and Europe.

(4.) *Bill short, narrow, elevated at the base: tail long, usually composed of sixteen feathers.*
CLANGULA.

THE BUFFLE-HEADED DUCK.

FULIGULA ALBEOLA.

PLATE CXVIII. FIG. 262.

(STATE COLLECTION.)

Anas albeola, LINNÆUS, p. 199. PENNANT, Arct. Zool. Vol. 2, p. 558. WILSON, Am. Orn. Vol. 8, p. 51, pl. 67, fig. 2 and 3 (male and female).
Fuligula (Clangula) id. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 394. RICHARDSON, F. B. A. Vol. 2, p. 458. NUTTALL, Man. Orn. Vol. 2, p. 445.
F. id. AUDUBON, B. of A. Vol. 6, p. 369, pl. 408 (male and female). GIRAUD, Birds of Long island, p. 335.

CHARACTERISTICS. Mirror and under wing-coverts white: tail rounded. *Male*, black and white; head tumid, purplish green: a large white patch passing over the head to each eye. *Female*, sooty black, with a white spot on each side of the head; beneath white. Length, 13·5.

DESCRIPTION. Bill short, narrow, compressed on each side, pitted above near the tip, which is very small; length from above 1·1: a suture along the margin of the upper mandible. Tarsus 1·3: middle and outer toes subequal, 2·2. Feathers on the head of the male linear and elongated, forming a subcrest.

COLOR. *Male:* Front, space before the eyes, chin and upper part of the throat, and occiput glossy green; neck and crown purple; sides of the neck brassy green. A broad band of white over the head, extending from one eye to the other. Lower part of the neck, shoulders, exterior scapulars, coverts, outer webs of secondaries, and all beneath white. Back, the long scapulars and tertiaries velvet-black. Quills deep black. Bill bluish black: legs yellowish. *Female:* Head and all above dark blackish brown; beneath white; greyish brown on the flanks. A small short white band beneath the eye. Six of the secondary quills white on the outer web.

Length, 13·0 – 14·0.

This little duck is known under the various popular names of *Little Dipper*, *Diedipper*, *Butter-bill*, *Butter-box*, and *Spirit Duck*. The male and female vary so much in their

markings, as to have given rise to the popular belief that they belong to distinct species. It occurs throughout the United States in the autumn, winter and spring, proceeding to high northern latitudes in the summer to breed. Feeds on aquatic vegetables and insects. Its flesh is generally unsavory. The history of its incubation is incomplete. Its geographical range is between the 24th and 68th parallels of latitude, and it occurs equally along the shores of the Pacific.

THE WHISTLER.

Fuligula clangula.

PLATE CXVI FIG. 257.

(STATE COLLECTION.)

Anas clangula. Wilson, Am. Orn. Vol. 8, p. 62, pl. 67, fig. 6 (male.)
Clangula id. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 393.
Clangula vulgaris et *barrovii.* Richardson, F. B. A. Vol. 2, p. 441 and 453. Nuttall, Man. Orn. Vol. 2, p. 441.
F. clangula. Audubon, B. of A. Vol. 6, p. 362, pl. 406.
Clangula americana. Bonaparte, Geog. and Comp. List, p. 58.

Characteristics. Mirror white; under wing-coverts black. *Male*, white; back, wings and tail black; head glossy purplish green: a white spot on each side of the head. *Female*, cinereous; beneath white; head and part of the neck drab: no white spot. Length, 18·5.

Description. Bill nearly straight above along its upper ridge, slightly concave behind the tip, where it is slightly flattened: a pendant subcrest on the occiput. Nostrils medial, linear, and near the ridge. Tarsus stout, compressed, 1·5 long. Tail short, and graduated with subacuminated feathers; the middle feathers 3·5 long, the outer 2·5: feathers of the flanks very long.

Color. *Male:* Bill black: feet yellow; the webs dusky. Head and upper part of the neck deep purplish green. Back, long inner scapulars, shoulders of the wing, primary coverts and quills black. Neck, shoulder, outer scapulars, coverts, secondaries and all beneath white. An elliptical patch of white on the cheek; beneath the eye, white. Tail hoary brown. *Female*, much smaller; head and upper part of the neck dull reddish brown; above greyish brown; wing-coverts, except at their bases, white; body beneath white: bill dusky yellowish towards the tip.

Length, 17·0 – 20·0.

The *Brass-eye*, *Whistler* or *Great-head*, as it is variously termed in different parts of the country, is another northern species, which appears on the coast of this State in November, and extends its southwardly migration to Mexico. Mr. Audubon has observed its nest near Green Bay: the eggs were nine in number, of a greenish color. Its common popular name with us is derived from the whistling sound of its wings when in motion. It ranges

from 26° to 68° north, and is abundant along the northwest coast of America. It has recently been separated from its closely allied species the *Golden-eye* (*F. glaucion*) of Europe. It is not confined to the seacoast, but is common along the rivers of the interior, where its flesh (probably from change of food) is considered to be unsavory. On the seacoast, its flesh is much esteemed.

THE HARLEQUIN DUCK.

FULIGULA HISTRIONICA.

PLATE CXVII. FIG. 259 (MATURE), 260 (IMMATURE).

(CABINET OF THE LYCEUM.)

Anas histrionica, LINNÆUS, p. 204. PENNANT, Arct. Zool. Vol. 2, p. 560.
A. id. WILSON, Am. Orn. Vol. 8, p. 139, pl. 72, fig. 1.
F. id. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 394.
Clangula id. RICHARDSON, F. B. A. Vol. 2, p. 459. AUDUBON, Birds of Am, Vol. 6, p. 374, pl. 409. NUTTALL, Man. Orn. Vol. 2, p. 448. GIRAUD, Birds of Long island, p. 336.

CHARACTERISTICS. Mirror blue-black, nearly uniform with the wing: space before the eyes and auriculars white. Tail wedge-shaped. Bill narrow, scarcely hooked at the end. *Male*, bluish slate, varied with black and white; flanks and line over the eye rufous. *Female*, uniform grey-brown, barred with dull brown; auricular spot, and a small one near the front, white. Length, 17·0.

DESCRIPTION. Bill shorter than the head, higher than broad at the base, 1·2 long and narrow, the tip turned down; the feathered frontlet descending low down, corrugated near the base; a small flap of naked skin over the angle of the mandibles. Tarsus short, compressed, 1·5 long: webs extending nearly to the tips of the nails, and pectinated on their margins. Second quills slightly longest.

COLOR. *Male adult* (fig. 259): Bill tinged with yellowish: feet blue. Frontlet bluish black, and from thence a band of the same color passing over the crown to the occiput, margined on each side with chesnut-red; neck and sides of the head bluish. A spot on the auriculars, another larger and triangular on the side of the head to the base of the bill, a narrow vertical stripe on the side of the neck, a ring round the base of the neck, another band over the breast, and a band across the wings, white. Sides light reddish; beneath brownish grey. *In change* (fig. 260), a round spot on the ears, a short vertical stripe on the sides of the neck, two crescent-shaped marks on the side of the neck and breast, a stripe on the scapulars and another on the coverts, more or less distinctly margined with black: breast reddish brown, barred with grey. Beneath whitish, spotted with brown: flanks and sides of the vent olive-brown, the former varied with chesnut, the latter with black. Back

olive-brown mixed with slate-blue. Mirror occasionally brownish, with a faint purple gloss. *Female*, a small spot behind the ear, and one on the forehead, white. Above, brown; beneath greyish white, with bars of reddish brown.

Length, 16·5 – 17·5.

This singularly marked duck varies so much in its markings, that scarcely any two individuals can be found precisely alike. According to Mr. Audubon, whose opportunities for examining this species have been very ample, the female (except in size) varies little in its markings from the male; whilst, what we in common with others have considered as the female, he describes as the young.

The *Harlequin Duck*, or the *Lord*, as it was named by the early English colonists from its showy appearance, is but a rare and occasional visiter to the shores of New-York, which forms its extreme southern range. It breeds from the Bay of Fundy northwardly, laying 12 – 14 greenish yellow eggs. Its geographical range is comprised between the 40th and 74th parallels, and it was observed by Mr. Townsend on the Northwest coast. It occurs equally in Europe and America.

(5.) *Bill small, extending up the forehead, and divided by a triangular projection of feathers; nostrils medial: tail of* 14 – 16 *feathers.* SOMATERIA.

THE EIDER DUCK.

FULIGULA MOLLISSIMA.

PLATE CXIII. FIG. 250 (MALE).

(STATE COLLECTION.)

Anas mollissima, LINNÆUS, p. 198. *Eider Duck*, PENNANT, Arct. Zool. Vol. 2, p. 553.
A. id. WILSON, Am. Orn. Vol. 8, p. 122, pl. 71, fig. 2 and 3.
F. (Somateria) id. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 388.
Somateria id. LEACH. RICHARDSON, F. B. A. Vol. 2, p. 448. AUDUBON, B. of A. Vol. 6, p. 349, pl. 405. GIRAUD, Birds of Long island, p. 331.

CHARACTERISTICS. Branches of the bill above, narrow, pointed: no mirrow. *Male*, black; head and back white; front and sides of the crown black. *Female*, reddish brown, barred with black: two indistinct white bars across the wings. Length, 24·5.

DESCRIPTION. Bill elevated at the base, and ascending on the forehead in two narrow lobes: dorsal line nearly straight, slightly concave, 2·7 long. Nostrils large, oblong, pervious. Tarsus short, compressed, 1·7 long. Tail short, pointed, of sixteen acuminated feathers.

COLOR. *Male adult:* Bill flesh-color: feet dusky greenish. Summit of the head dark glossy

blue, with a white medial line on the crown, passing into light green and white on the hind head and sides of the neck. Upper part of the breast pale buff. Upper tail-coverts, rump, tail and all beneath brownish black. Remainder of the back, scapulars, lesser coverts, inner curved secondary quills, sides of the rump, and under wing-coverts white. *A young male*, shot February 4, on Long island: Head light grey ferruginous or drab, extending half way down the neek; cheeks and sides of the neck darker; an indistinct line half way down the neck from the crown, with a few violet black feathers intermixed: eye-stripe lightish. Chin, throat, upper part of the breast and sides of the rump white; some of the feathers tipped with brownish. Back, rump and wing-coverts dusky brown; the feathers tipped with greyish and dull ferruginous. Scapulars dusky, largely mixed with white. Primaries edged with greyish. Upper and under tail-coverts black; beneath dusky brown; the feathers lightly tipped with greyish and ferruginous. Bill and feet as in the old male. *Female:* Head and neck reddish brown, minutely streaked with brownish black. Body reddish brown, barred with black. Quills brownish black: greater coverts and secondaries tipped with white.

Length, 24·0 – 25·0.

The *Eider Duck*, so celebrated for the softness of its down, is an arctic bird, which, in very severe winters, makes its appearance along the shores of this State. It is known on Long island under the names of *Black* and *White Coot*, *Big Sea Duck*, and *Shoal Duck*. On the shores of Maine, it is called *Squaw Duck*. During the winter of 1842, they were abundant in the markets of New-York at $1.25 per pair; their flesh is, however, not highly prized. Mr. Audubon suggests that they might be domesticated without much difficulty, and it is highly desirable that the attempt should be made. It breeds from Maine northwardly, and ranges from 39° to 81° north, although this State may now be considered as the limits of its extreme southern range. Its eggs are from 6 – 10, of a pale olive-green. The Eider Duck is common to Europe and America.

THE KING DUCK.

FULIGULA SPECTABILIS.

PLATE CXIII. FIG. 251.

(STATE COLLECTION.)

Anas spectabilis, LIN. p. 195. *King Duck*, PENNANT, Arct. Zoology, Vol. 2, p. 554.
A. id. SABINE, Greenland Birds, Suppl. Parry's Voy. *S. id.* BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 389.
F. id. AUDUBON, B. of Am. Vol. 6, p. 347, pl. 404. RICHARDSON, F. B. A. Vol. 2, p. 447. GIRAUD, Birds of Long island, p. 333.

CHARACTERISTICS. Branches of the bill dilated, rounded: no mirror. *Male:* neck and back white; crown and nape bluish grey; an arrow-shaped black mark on the throat. *Female*, reddish drab, with abbreviated bars of black. Length, 24·0.

DESCRIPTION. Bill shorter than the head; the point abruptly turned down; the ascending branches nearly vertical. Frontlet nearly perpendicular to the bill. Tarsus short, robust, 1·6 long, compressed. Inner secondaries elongated, curved outwards, and overlapping the primaries. Tail short, much rounded, and composed of fourteen stiff and rather pointed feathers. *Male:* Bill reddish; the ascending portion verging to orange. Feet dusky orange: webs black. Frontlet, margin of the dilated base of the upper mandible, a slight dash on the upper, and a larger patch on the lower eyelid, jet black: cheeks pale green. Crown and nape bluish grey, edged on the sides with yellowish, and this again bordered with green; edged below with black. Breast dingy buff. Hind neck, upper part of the back, lesser wing-coverts and sides of the rump white; remaining part of the plumage black: an oblique black streak on the throat. *Female:* Bill pale greyish; feet dull brownish red: general color of the rest of the body reddish brown; the ends of the feathers dusky brown. *Young:* Head and neck dull yellowish grey, with numerous black spots; breast and flanks barred and spotted with black. Length, 21·0 – 25·0.

The *King Duck*, like the preceding, is an inhabitant of high northern latitudes, very rarely descending as low as the shores of this State. It is equally valued for its down with the preceding. It breeds from Labrador northwardly; the eggs are 5 or 6, uniform dull greenish. Its extreme geographical range extends from 40° to 81° north on this continent. It also occurs in the high northern latitudes of Europe.

(*EXTRA-LIMITAL.*)

(6.) *Bill as high as the head: body and feet robust: nostrils basal. Tail wedge-shaped, of* 12 *feathers.*

MACROPUS. STELLARIA.

F. dispar, PALL. (AUD. B of Am. Vol. 6, p. 368, pl. 407.) Mirror black, margined with white: bill and feet bluish. *Male*, bright reddish beneath; forehead and band on the occiput greenish; head white; a broad band round the neck, and the back, velvet-black. *Female*, reddish brown varied with ash. Length, 16·0. *Northwest coast.*

(7.) *Bill broad, gibbous above the nostrils, the edges dilated; teeth coarse: nostrils large and elevated. Tail of* 14 *or* 16 *feathers.* OIDEMIA.

THE SURF DUCK OR COOT.

FULIGULA PERSPICILLATA.

PLATE CXIV. FIGS. 253, 254.

(STATE COLLECTION.)

Anas perspicillata, LIN. p. 201. *Black Duck*, PENNANT, Arct. Zool. Vol. 2, p. 556.
A. id. WILSON, Am. Orn. Vol. 8, p. 49, pl. 67, fig. 1.
F. (Oidemia) id. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 389.
F. id. AUDUBON, B. of Am. Vol. 6, p. 337, pl. 402.
Surf Duck. RICHARDSON, F. B. A. Vol. 2, p. 449. NUTTALL, Man. Orn. Vol. 2, p. 416. GIRAUD, Birds of Long island, p. 329.

CHARACTERISTICS. No mirror: feet red. *Male*, glossy black; crown and nape marked with white. *Female*, sooty brown; near the bill, and auriculars, whitish. Length, 19·5.

DESCRIPTION. Bill broad, short, as deep as wide at the base, flattened towards the tip, which is rounded; the edges turned outwards; the lateral prominences black and naked; the central prominence feathered above. Nortrils submedial, pervious, and near the ridge. Tarsus 1·6, compressed. Tail wedge-shaped, of fourteen stiff pointed feathers.

COLOR. *Male:* Bill yellow, verging to orange towards the tip: a square black patch near the base. Legs and feet yellow; the webs dusky. A white heart-shaped spot on the crown, beneath the eyes, and an oblong patch of the same on the nape. Remainder of the plumage bluish black. *Young male in change* (fig. 254), sooty brown; back and wing-coverts edged with grey; bill black; two rounded ash-grey spots beneath the eye; nape mixed with greyish and black. *Female*, brownish black, darkest above; the feathers on the breast and sides edged with light greyish.

Length, 19·0 – 20·0.

The *Box Coot, Spectacle Duck, Black Sea Duck* or *Butterboat-bill*, is very common on the coast of New-York during the winter, extending its migrations to the Gulf of Mexico, and returning to the North in the spring. It breeds from Labrador northwardly; the eggs are cream-colored, and five or six in number. It occurs along the shores of the Arctic sea and Northwest coast. Its flesh is coarse and fishy. The latitudinal range of this species is included between the 24th and 72d parallels. Accidental in Europe.

THE BROAD-BILLED COOT.

FULIGULA AMERICANA.

PLATE CIX. FIG. 242.

(STATE COLLECTION.)

Anas nigra. WILSON, Am. Orn. Vol. 8, p. 135, pl. 72, fig. 2.
Oidemia id. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 390.
Oidemia americana. RICHARDSON, F. B. A. Vol. 2, p. 450.
F. id. AUDUBON, B. of Am. Vol. 6, p. 343, pl. 403 (male and female).
American Scoter Duck, F. id. NUTTALL, Man. Orn. Vol. 2, p. 423. GIRAUD, Birds of Long island, p. 331.

CHARACTERISTICS. Entirely black: no mirror. Protuberance on the black bill orange yellow, including and not extending beyond the nostrils. *Female*, dusky brown; bill uniform dusky. Length, 18·0.

DESCRIPTION. Greatest breadth of the bill 0·9, and equal to the height of the central protuberance. Nostrils oblong-oval, medial: end of lower mandible enlarged. Tarsus 1·8, and much compressed: middle and outer toe subequal, 3·0 long. Tail short, pointed, of sixteen acute feathers; the central pair 1·5 longer than the outer ones.

COLOR. *Male*, uniform black; underneath the wings glossy light ash. Iris brown. *Female:* protuberance on the bill scarcely evident; whole bill uniform brownish black. Uniform color dusky brown; lighter beneath.

Length, 17·0 – 19·0.

This duck, which is known on this coast under the name of *Broad-billed Coot*, and farther east by the name of *Butter-bill*, is described in the books under the name of *American Scoter Duck*. It is by no means as common as the preceding, although in some seasons it is very abundant. Until recently, it has been confounded with the *F. nigra* of Europe. Food, fishes and marine shells. It breeds from Labrador northwardly. Its geographical range similar to the preceding. Confined.

THE WHITE-WINGED COOT.

FULIGULA FUSCA.

(STATE COLLECTION.)

Anas fusca, LIN. p. 196. PENNANT, Arct. Zool. Vol. 2, p. 555. WILSON, Am. Orn. Vol. 8, p. 137, pl. 72, fig. 3.
F. (Oidemia) id. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 390. RICHARDSON, F. B. A. Vol. 2, p. 449.
F. id. NUTTALL, Man. Orn. Vol. 2, p. 419. AUDUBON, B. of Am. Vol. 6, p. 332, pl. 401 (male and female). GIRAUD, Birds of Long island, p. 328.

CHARACTERISTICS. A white mirror: feet red. *Male*, black; a white spot under the eye. *Female*, blackish brown. Length, 22·0.

DESCRIPTION. Bill very broad, 1·6 long measured from the feathers above; the central prominence ridged in the middle. Nostrils very large, sub-basal, oval, pervious. Tarsus short, compressed, 1·8 long: outer and middle toes subequal, 3·5 long. Inner secondaries overlapping obliquely the primaries. Tail wedge-shaped, of fourteen stiff feathers.

COLOR. *Male:* Bill black at the base above, yellowish in the middle, verging to orange on the sides. A spot under the eye, and outer secondary quills white. Rest of the plumage brownish black, with purple and green reflections on the head and neck. *Female:* Bill dusky, and smaller than in the male. Iris yellow. Mirror white. The remaining part of the plumage sooty brown, with the exception of two light grey spots on the sides of the head: one near the base of the bill; the other behind the eye.

Length, 22·0–23·0.

This duck, which is described in the books under the name of *Velvet Duck*, is better known here as the *White-winged Coot*, to distinguish it from its kindred species, the *Broad-billed Coot*. It is much prized for the quantity and quality of its down, but is held in little estimation for food. It appears on this coast about the middle of October in large flocks, and many remain until the beginning of April. Breeds from the coast of Maine northwardly: the eggs are of a uniform pale cream-color. It ranges during the winter to the coast of Georgia in 31° north latitude, and extends from thence to the 72d parallel. Found on both sides of the Atlantic.

GENUS ANAS. Linnæus.

Bill as long or slightly longer than the head, broad and depressed generally throughout its whole length, widening towards the tip: upper mandible with a small nail at the tip. Tarsus rounded; hind toe very small, simple, or with a narrow membrane. Tail variously shaped, of 14 – 18 feathers.

Obs. This genus comprises about twelve American species, which are chiefly confined to freshwater streams, although some are found on the seacoast.

THE WOOD DUCK.

Anas sponsa.

PLATE CXI. FIG. 247.

(STATE COLLECTION.)

Anas sponsa, Lin. p. 207. Pennant, Arct. Zool. Vol. 2, 562. Wilson, Am. Orn. Vol. 8, p. 97, pl. 70, fig. 3.
A. (Anas) id. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 385. Audubon, Birds of Am, Vol. 6, p. 271, pl. 391. Nuttall, Man. Orn. Vol. 2, p. 394.
Dendronessa id. Richardson, F. B. A. Vol. 2, p. 446.
Aix id. Bonaparte, Geog. and Comp. List, p. 57. Giraud, Birds of Long island, p. 312.

Characteristics. A pendant crest: throat white; mirror purplish blue, tipped with white; under wing-coverts white, spotted with black. *Male:* head and crest golden green, with two whitish stripes. *Female:* head and crest brownish, and a white space round the eye. Length, 20·0.

Description. Bill shorter than the head, the feathers in front descending low; tip of the bill much hooked; sides of the bill strongly toothed. Tarsus 1·4, slightly compressed. Tail broad and rounded, of sixteen feathers. Feathers of the middle of the head, and behind, elongated.

Color. *Male:* Head deep glossy green. A narrow white line passes from the base of the bill over the eye; another from behind the eye, curving down the neck. The white of the chin and throat dilated, and nearly meeting on the sides of the neck: lower part of the neck and shoulders purplish red, with numerous white arrowheaded spots beneath. Flanks yellowish grey, finely waved with black; broader black and white bars behind; glossy reddish purple on each side of the rump. Tips of the inner webs of the quills glossy green. Tail and upper tail-coverts greenish black. *Female*, smaller. Crest not so much developed: head dusky; dorsal plumage brown, with purple and green metallic reflections; a white patch around and behind the eye; throat white; breast yellowish brown, streaked with darker brown; under tail-coverts grey, minutely speckled with brown.

Length, 19·0 – 20·5.

This is the most beautiful of all the ducks known; the only one approaching it being the *A. galericulata*, or *Mandarin Duck* of China, which indeed it strongly resembles. Its popular name of *Wood Duck* is derived from the fact that it makes its nest in hollow trees. During the summer only is it seen in this State, migrating southwardly with the cold weather. It is easily domesticated, and one of my neighbors raises numbers of them annually. Its food consists of acorns, seeds of aquatic plants, and insects. It breeds from Mexico to the Columbia river, and eastwardly to Nova-Scotia: its eggs yellowish white. It has been found from 19° south to 54° north latitude. Peculiar to America.

THE BLUE-WINGED TEAL.

Anas discors.

PLATE CXI. FIG. 246.

Anas discors. Linnæus, Syst. Nat. p. 205.
White-faced Teal. Pennant, Arct. Zool. Vol. 2, p. 568.
A. id., Blue-winged Teal. Wilson, Am Orn. Vol. 8, p. 74, pl. 68, fig. 4.
A. (Anas) id Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 385.
Boschas id. Richardson, F. B. A. Vol. 2, p. 444. Nuttall, Man. Orn. Vol. 2, p. 307.
A. id. Audubon B. of A. Vol. 6, p. 287, pl. 393.
Cyanopterus id. Bonaparte, Geog. and Comp. List, p. 57. Giraud, Birds of Long island, p. 315.

Characteristics. Mirror green, bordered with white; wing-coverts light blue; quill-shafts dusky. *Male:* head and neck purple-green; crown black, with a white crescent on each side of the head before the eyes. *Female:* head and neck dusky; light-colored on the sides of the head near the bill. Length, 15·5.

Description. Bill linear, equal in length to the head; the tip turned down: teeth projecting below the margin. Nostrils sub-basal, rather small, oblong-oval, pervious. Hind toe small, with a narrow membrane beneath. Tarsus 1·2, somewhat compressed. Tail short, acute, with fourteen pointed feathers.

Color. *Male:* Bill bluish black; feet yellowish; upper part of the head black; a crescent-shaped spot of white before the eyes; hind part of the head, and remainder of neck bluish purple; base of neck, and upper part of back and wing-coverts minutely barred and spotted with black and brown. Beneath pale chesnut, thickly marked with small round spots; sides of the rump, tips of the greater coverts and long axillaries white; smaller wing-coverts bright blue; outer webs of secondaries dark green. *Female*, general dusky hue, tinged with reddish brown; lesser wing-coverts blue as in the male; chin and sides of the base of the bill greyish white.

Length, 15·0 – 16·0.

The history of the migrations of this species is incomplete. It breeds in Texas, according to Mr. Audubon, and on Long island according to Mr. Giraud. The eggs were found by Mr.

Leib (*Journ. Acad. Nat. Sc.* Vol. 8, p. 203) on the borders of Lake Erie in Michigan: he describes them as 15 to 18, of a delicate cream-color. It appears with us in September, when it is abundant on the Hudson, and soon leaves for the South. Its geographical range through the interior extends from the Atlantic to the Pacific, and along the coast from Mexico to 58° north latitude.

THE GREEN-WINGED TEAL.

ANAS CAROLINENSIS.

PLATE CXII. FIG. 249.

(STATE COLLECTION. CABINET OF THE LYCEUM.)

Anas carolinensis, GMELIN, p. 533. *American Teal*, PENNANT, Arct. Zool. Vol. 2, p. 569.
A. crecca. WILSON, Am. Orn. Vol. 8, p. 101, pl. 60, fig. 4.
A. sylvatica, VIEILLOT. NUTTALL, Man. Orn. Vol. 2, p. 400.
A. (Anas) id. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 443.
A. carolinensis. AUDUBON, B. of A. Vol. 6, p. 281, pl. 392.
A. (Baschas) crecca. RICHARDSON. F. B. A. Vol. 2, p. 443.
Querquedula carolinensis. BONAPARTE, Geog. and Comp. List. GIRAUD, Birds of Long island, p. 314.

CHARACTERISTICS. Mirror bright green: black on the sides, margined with white and rufous. *Male:* head and neck chesnut; a green band on each side of the head, through the eyes. *Female*, wholly dusky varied with white; throat white; bill and feet bluish. Length, 14·0.

DESCRIPTION. Head subcrested, with rather elongated feathers. Bill scarcely as long as the head, somewhat enlarged towards the tip; the lamellar teeth projecting on the sides. Nostrils small, sub-basal, pervious, oblong-oval. Tail rather pointed, of sixteen feathers; the central pair 0·4 longer than the outer, and filiform at their tips.

COLOR. *Male:* The green band on the sides of the head ends in bluish black on the back part of the neck. A brownish black patch on the chin and the throat. Head and neck bright chesnut. Breast reddish brown, with round dark-colored spots. A broad white or yellowish white oblique stripe, or slightly curved, 1·3 in length, on each shoulder. *Female:* Chin and belly white. Crest wanting. Head and neck greyish, streaked with dark brown: sides barred with brown.

Length, 13·5 – 14·5.

The *Green-winged Teal* is common on all our freshwater lakes and ponds, during the autumn and winter. Its flesh is very savory. It breeds along the great lakes and northwardly. Observed by Mr. Townsend on the shores of the Pacific. Eggs dull yellowish white. On the Atlantic, it ranges from 23° to 70° north.

THE PIN-TAIL DUCK.

ANAS ACUTA.

PLATE CX. FIG. 244.

(STATE COLLECTION.)

Anas acuta, LINNÆUS, p. 202. *Pin-tail Duck*, PENNANT, Arct. Zool. Vol. 2, p. 566.
A. id. WILSON, Am. Orn. Vol. 8, p. 72, pl. 68, fig. 3. BONAPARTE, Ann. Lyc. Vol. 2, p. 393. RICHARDSON, F. B. A. Vol. 2, p. 411. AUDUBON, B. of A. Vol. 6, p. 266, pl. 390. *Dafila*, LEACH.
A. id. NUTTALL, Man. Orn. Vol. 2, p. 386. GIRAUD, Birds of Long island, p 310.

CHARACTERISTICS. Mirror green, with purple reflections, bordered by rufous and white. Tail long. Bill long, linear, nearly black. *Male*, light ash; a white stripe on each side of the neck; two middle tail-coverts very long and tapering; vent black. *Female*, smaller, yellowish brown: mirror and vent uniform with the rest. Length, 24·0 excluding tail-coverts.

DESCRIPTION. Bill as long as the head; the plates scarcely projecting beyond the sides. Tarsus compressed, 1·5 and shorter than the middle toe. Outer web of the second quill sinuated. Tail of fourteen feathers, long, pointed. Two middle upper tail-coverts much elongated, pointed, and from 2·0 to 2·7 in length.

COLOR. *Male:* Head brown glossed with purple: bill and feet bluish black: nape metallic green passing into brown. Back with minute angular bars of brownish black and yellowish, giving a greyish hue to those parts; flanks barred with the same; scapulars and tertiaries bordered with white. Upper tail-coverts whitish on the inner webs, dark-colored on the outer, and glossed with green: long upper tail-coverts black glossed with green. Tail brown, margined with soiled whitish. Beneath yellowish white; lower part of the abdomen grey: vent and under tail-coverts black, with slight glossy reflections; the outer margins white. *Female*, smaller; the mirror dull, without the green gloss, bordered before and behind with reddish: head and neck yellowish brown speckled and streaked with dusky. Above reddish brown, margined with blackish: beneath yellowish brown, spotted and barred with dusky; the middle tail-coverts slightly exceeding the tail-feathers.

Length, 22·0 – 25·0.

The *Pin-tail*, *Sprig-tail* or *Winter Duck*, is more common in the interior than along the coast. It is particularly abundant along the shores of Lake Ontario, breeding in high northern latitudes. It ranges during the winter and spring across the continent, and has been observed from Mexico to 70° north latitude. It is also found on both sides of the Atlantic. The eggs are said to be greenish white, tinged with buff. Its food is similar to that of the preceding species.

THE SHOVELLER, OR SPOONBILL.

ANAS CLYPEATA.

PLATE CX. FIG. 245.

(STATE COLLECTION.)

Anas clypeata, LINNÆUS, p. 200. PEN. Arct. Zool. Vol. 2, p. 557. WILSON, Am. Orn. Vol. 8, p. 65, pl. 67, fig. 7. *Rhyncaspis id.* LEACH. BONAPARTE, Ann. Lyc. N. Y. Vol 2, p. 382. RICHARDSON, F. B. A. Vol. 2. p. 439, *A. id.* AUDUBON, B. of Am. Vol. 6, p. 293, pl. 394. NUTTALL, Man. Orn. Vol. 2, p. 375. GIRAUD, Birds of Long island, p. 317.

CHARACTERISTICS. Mirror green bordered with white. *Male*, brown: head and neck dark green; wing-coverts blue. *Female*, yellowish brown, spotted with black. Length, 19·0.

DESCRIPTION. Bill longer than the head, very broad, and much dilated and bent down at the base: teeth at the sides in long and slender plates. Tarsus 1·2 – 1·4, moderately compressed: hind toe with a narrow membrane. Tail short, rounded, of fourteen pointed feathers.

COLOR, quite variable. *Male:* Head and half the neck, middle of the back, quills and tail brown; the hind neck tinged with bright green. Upper part of the breast, sides of the lower portion of the neck, some of the scapulars and sides of the rump, white. Abdomen and flanks deep orange-brown. Vent and under tail-coverts black, glossed with green. Five or six of the outer secondaries bright green on their outer webs. *Female*, brown above; beneath yellowish brown, with numerous dusky angular bars: mirror less vivid. *Young*, resembling the female.

Length, 17·5 – 20·0.

The *Shoveller*, or *Spoonbill*, is not an abundant species in this State, and is more frequently obtained along the rivers and lakes than on the coast. It usually appears in the winter and spring: the specimen described above was shot April 10. It breeds in Texas westward to Columbia, and through the fur countries: the eggs are from 12 – 14, pale greenish yellow. Its food consists of small fishes, insects, and the smaller shells. Is not known to breed within the limits of the United States. It is highly prized as affording delicate eating, and ranges from Mexico to 70° north latitude. Common to Europe and America.

THE GREY DUCK, OR GADWALL.

ANAS STREPERA.

PLATE CIX. FIG. 243.

(CABINET OF THE LYCEUM.)

Anas strepera, LIN. p. 200. *Gadwall*, PENNANT, Arct. Zoology, Vol. 2, p. 575.
A. id. WILSON, Am. Orn. Vol. 8, p. 120, pl. 61, fig. 1. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 383. AUDUBON, B. of Am. Vol 6, p. 254, pl. 383.
Chauliodus, RICHARDSON, F. B. B. Vol. 2, p. 440. *Chauletasmus*, GRAY.
A. id. NUTTALL, Man. Ornith. Vol. 2, p. 383. GIRAUD, Birds of Long island, p. 304.

CHARACTERISTICS. Mirror white, bordered by black and chesnut: feet orange; webs blackish. *Male*, blackish waved with white. *Female*, reddish brown; rump uniform with the rest. Length, 20·0.

DESCRIPTION. Bill nearly as long as the head, straight, sublinear; the teeth or plates long and delicate. Nostrils sub-basal, moderate, oblong. Tibia bare for some distance. Tail short, rounded, composed of sixteen stiff acuminated feathers, of which the central pair project somewhat beyond the others.

COLOR. *Male:* Head and neck greyish white, speckled with brown: bill bluish black; summit of the head tinged with chesnut-brown. Middle wing-coverts chesnut-brown. Lower part of the neck, back and breast, exterior flanks and scapulars dark brown, with numerous white crescents originating from the tips of the feathers. Throat and chin (in an adult in full plumage) of a uniform buff; greater coverts, rump, upper and under tail-coverts jet black; interior scapulars and tertiaries greyish brown; wings and tail grey-brown, the former rufous on the inner webs. Mirror white, bordered in front by black. Under parts minutely waved with grey. *Female*, smaller. Bill yellowish: feet pale yellowish. Head above greyish brown; neck, breast, and all the upper parts light yellowish red spotted with dusky: a dull light-colored streak over the eyes. *Young*, uniform rusty brown above: each feather marked in the centre with black.

Length, 19·0 – 20·0.

This beautiful species is rather rare in this State. It was first discovered by Wilson on the Seneca lake, and has since been seen in other places, even along the seacoast. In New-Jersey, it is called the *Welsh* or *German Duck*. According to Dr. Bachman, it has been successfully domesticated. It breeds from Texas westwardly to the Columbia river; in the States of New-York, Massachusetts, Maine and northwardly: the eggs are greenish grey. Food, small fish, shells, insects and aquatic plants. Its geographical range extends from Mexico to 68° north latitude. Common to Europe and America.

THE BLACK DUCK.

ANAS OBSCURA.

PLATE CVIII. FIG. 241.

(STATE COLLECTION.)

Anas obscura, GMELIN. PENNANT, Arct. Zool. Vol. 2, p. 564. WILSON, Am. Orn. Vol. 8, p. 141, pl. 72, fig. 5. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 384. AUDUBON, B. of A. Vol. 6, p. 244, pl. 386 (male and female). NUTTALL, Man. Orn. Vol. 2, p. 392. PEABODY, Birds of Mass. p. 388. GIRAUD, Birds of Long Island, p. 301.

CHARACTERISTICS. Mirror violet-blue, with greenish reflections, bordered with black: under wing-coverts and long axillaries pure white. *Male*, blackish brown, margined on the edges of the feathers with paler. *Female* and *young*, darker. Length, 23·0.

DESCRIPTION. Bill about the length of the head, flattened, and rounded at the tip. Nostrils sub-basal, oblong-oval, and placed near the ridge. Hind toe very small. Tail short, rounded, of eighteen pointed feathers.

COLOR. *Male:* Upper part of the head deep dusky brown, with light streaks of drab. Cheeks, and streaks over the eye, dull cream-color. Neck dull yellowish white; each feather with a central line of blackish brown. Mirror greenish blue, with purple reflections, bordered with black: some of the secondaries tipped with whitish. Bill yellowish green: feet reddish orange. Beneath brownish black. Under surface of the wing and the axillaries white. *Female*, smaller and browner; the mirror without the posterior white margined line.

Length, 22·0–24·0.

The *Black Duck*, as it is universally called except in the books, is very abundant in this State, not only in the interior, but on the seacoast. It breeds from Texas to Labrador, a range quite remarkable: the eggs are from 8 – 10, of a dull white color. They appear in this State in the spring, and remain during the summer; many, of course, proceeding farther north. In October, they again appear on the seacoast in large flocks, and then proceed southwardly as far as Texas. They were seen by Mr. Townsend on the northwest coast. Few ducks are more highly prized than these; and from the experiments which have already been made, it appears that they might be readily domesticated.

THE AMERICAN WIDGEON, OR BALD-PATE.

ANAS AMERICANA.

PLATE CXII. FIG. 248.

(STATE COLLECTION.)

Anas americana, GMELIN. *American Widgeon*, PENNANT, Arct. Zoology, Vol. 2, p. 567.
A. id. WILSON, Am. Orn. Vol. 8, p. 86, pl. 69, fig. 4. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 384.
Mareca id. RICHARDSON, F. B. A. Vol. 2, p. 445. AUDUBON, B. of Am. Vol. 6, p. 259, pl. 389 (male and female).
A. id. NUTTALL, Man. Orn. Vol. 2, p. 389, fig. GIRAUD, Birds of Long island, p. 306.

CHARACTERISTICS. Mirror green, surrounded by black: wing-coverts white. Tail wedge-shaped. *Male*, black waved with reddish; head and neck yellowish white; crown white or yellowish white; a green band on each side of the neck; breast light chesnut; throat whitish. *Female*, whole head and neck yellowish white sprinkled with black. Length, 19·5.

DESCRIPTION. Bill shorter than the head, and abruptly curved at the tip: nostrils oblong, sub-basal, pervious. Tibia bare for a short distance beneath. Tarsus 1·5 long, compressed. Feathers of the crown and occiput slightly elongated. Tail short, pointed, of sixteen feathers; the central pair acute.

COLOR. *Male:* Bill and feet greyish blue; the former black at the tip. Crown white or light cream, spotted with dusky on the sides: a broad green band extends from the eyes behind to the nape. Breast brownish red, glossed with grey, and varying to light chesnut or vinaceous. Back minutely waved with brownish red and black. Lesser wing-coverts, quills and tail brown or brownish grey: greater coverts, sides of the rump, breast and belly pure white; sides of the body barred or minutely waved with white and brownish. *Female*, smaller; above dark brown, edged with pale brown and white. Head and neck whitish; the former barred, and the latter streaked with dusky. No green stripe on the head. Breast blackish, barred with brownish red. Beneath white: under tail-coverts dusky barred with reddish brown.

Length, 18·5 – 20·5.

The *American Widgeon*, or *Bald-pate*, appears in this State in the spring, and late in the autumn. It is distributed very generally throughout the Republic, and was observed by Mr. Townsend on the shores of the Pacific. It breeds in Mexico, probably in this and the adjoining States, and certainly in high northern latitudes. It is not a common species in this State, but is more abundant at the South and West in winter. Its food consists chiefly of aquatic vegetables, and is valued for its delicate flavor. It ranges from 68° north to the equator.

THE EUROPEAN WIDGEON.

ANAS PENELOPE.

Anas penelope, LIN. p. 202. GIRAUD, Birds of Long island, p. 307.

CHARACTERISTICS. Mirror green, surrounded by black; wing-coverts white. *Male*, black waved with white: head and neck reddish chesnut; crown cream-color; no green band; breast vinaceous; throat black. *Female*, dark brown: whole head and neck reddish, sprinkled with black. Length, 20·0.

DESCRIPTION. "Bill narrow, bluish lead-color, tipped with black; top of the head, from the bill and chin, yellowish cream-color; rest of the head, and upper part of the neck, bay speckled with black; breast vinaceous; belly white; upper and under tail-coverts black, edged with rufous above and with white beneath; back, scapulars, and sides under the wings black and white in fine undulated lines; coverts of the wings dusky brown, with pale edges; quills dusky; secondaries green on the outer webs, tipped with black: those next the body have the margins of the outer webs more or less white. Tail cuneiform; the two middle tail-feathers pointed, and considerably longer than the rest: these are dusky, dashed with cinereous; the rest cinereous, edged with rufous brown. Legs and feet dusky lead-color; the latter small. Length, 20 inches" (*Montagu*).

Col. Montagu farther observes, that this species is subject to great variety: in some the forehead is almost white, and the feathers on the back and sides mottled with brown; the wing-coverts mixed with white: *female* brown; the middle of each feather darkest; fore part of the neck and breast pale brown; wings and belly like the male.

Mr. G. N. Lawrence of New-York has noticed, in the work of Mr. Giraud cited above, a specimen shot on Long island, and in an imperfect condition, which appears to be undoubtedly the *Widgeon* of the eastern continent. He notices the following distinctive marks: "The head rises gradually from the bill, not abruptly as in the American species, and without the black line where it joins the head. The frontal feathers extend on the bill a quarter of an inch, forming an acute angle. Crown reddish cream: other parts of the head and neck bright rufous, plainly sprinkled with small black spots, more numerous adjoining the bill. Throat of a dark rich vinous color, almost black. Crest small, and the green color on the sides of the head confined to the immediate vicinity of the eye. Under wing-coverts ash-grey; those of ours being white."

Mr. Audubon seems inclined to the opinion that there is no difference between the American and the European and Asiatic widgeons; although from "not having traced them through all their gradations," he can not positively assert their identity. I learn subsequently from Mr. Giraud, that two or three others have been shot on Long island.

THE MALLARD.

Anas boschas.

PLATE CVIII. FIG. 240.

Anas boschas, Lin. p. 205. Pennant, Arct. Zool. Vol. 2, p. 563. Wilson, Am. Orn. Vol. 8, p. 112, pl. 60, fig. 7. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 383.
Boschas domestica. Richardson, F. B. A. Vol. 2, p. 442. Audubon, Birds of Am. Vol. 6, p. 236, pl. 385. Nuttall, Man. Orn. Vol. 2, p. 378.

Characteristics. Mirror violet, bounded by black and white; rump blackish. *Male:* head and neck green; a white collar; four middle tail-coverts recurved. *Female* and *young*, wholly brownish, varied with yellowish and blackish. Length, 23·0.

Description. Bill subequal with the head, flattened, and somewhat dilated towards the end. Tibia bare a short distance from the joint. Tail rounded, of sixteen feathers.

Color. *Male:* Bill yellowish: feet orange red. Head and neck deep green, with a white ring beneath; neck and breast dark chesnut; upper part of back, wing-coverts and quills ash-brown of different shades; rump and upper tail-coverts black ish green; some of the outer scapulars chesnut, with darker transverse lines. Mirror with purple and green reflections. Sides of the rump, and interior of the wings, white. *Female*, reddish brown, spotted with dusky; beneath yellowish grey, obscurely spotted with brownish black.

Length, 24·0 – 25·0.

This is the well known original on both continents of our common domestic *Duck*, of which we have now so many varieties. Messrs. Cooper and Nuttall have noticed a large wild variety? measuring 30 inches. In these the primaries are white, and the tail-feathers grey.

The *Mallard* is common about most of the lakes in the interior of the State, and also on the seacoast. It leaves us in the autumn for the South, and has been observed from Mexico to the 68th parallel.

(*EXTRA-LIMITAL.*)

A. breweri. (Aud. B. of Am. Vol. 6, p. 252, pl. 387.) Mirror green. Head and neck green; pale yellowish on the sides; rump and upper and under tail-coverts black: a light yellowish collar round the neck. General hue dusky, finely waved with grey. Length, 23·0. *Louisiana.*

A. moschata, Lin. Glossy black: a papillary naked red skin surrounding the eyes, on the cheeks, and base of the bill. Length, 25·0. *Brazil.* A few observed on the coast of the Southern States. Domesticated.

GENUS ANSER. Brisson.

Bill as long as, or shorter than the head, somewhat higher than broad, subcylindrical, flattened towards the tip, and deflected: nostrils a little behind the middle. Neck moderately long. Teeth short, conic, acute. Lores feathered. Wings moderate, acute, sometimes spurred. Tarsus moderate.

THE WILD GOOSE.

ANSER CANADENSIS.

PLATE CVI. FIG. 237.

Anser canadensis. Willughby, Orn. p. 276, pl. 70.
Canada Goose. Pennant, Arct. Zool. Vol. 2, p. 544.
A. id. Wilson, Am. Orn. Vol. 8, p. 53, pl. 67, fig. 4. Bonaparte, Ann. Lyc. N. Y. Vol. 2, p. 377. Aud. B. of A. Vol. 6, p. 178, pl. 376. Nuttall, Man. Orn. Vol. 2, p. 348. Richardson, F. B. A. Vol. 2, p. 468.

Characteristics. Dark ash: head, neck and tail black; cheeks and throat white; bill and feet black. Tail of 18 feathers. Length, 41·0.

Description. Bill shorter than the head, subconical, depressed at the tip. Tibia bare for a short distance. Tarsus 3·5, slightly compressed. Wings with a slight protuberance: second quill longest. Tail very short, rounded, with 18 pointed feathers.

Color. Head, the largest portion of the neck, quills, rump and tail black. Wings and back dark brown, with paler edges. Sides of the rump, upper and under tail-coverts pure white. Beneath yellowish grey or dusky white. *Female*, similarly marked, but the colors not so vivid.

Length, 40·0 – 42·0.

The *Wild Goose* observes the usual migrations of its tribe, but breeds through a very extensive range of country. It was noticed breeding in Missouri by Mr. Nuttall. It breeds sparingly from Mississippi to Nova-Scotia, according to Mr. Audubon, and abundantly in Labrador and between the 60th and 70th parallels of latitude. It appears with us in large flocks late in the autumn from the North, and remains until the bays are frozen over, affording much amusement to the sportsmen, and profit to the gunners who pursue it as a business. They return in the earliest spring, and soon migrate again to the North. The eggs are dull yellowish green. It is frequently kept in a state of domestication, and mates with the common grey goose, producing hybrids which are much esteemed. It ranges across the continent, and from 26° to 70° north latitude.

THE WHITE-FRONTED GOOSE.

ANSER ALBIFRONS.

PLATE CVI. FIG. 236.

(CABINET OF THE LYCEUM.)

Anas albifrons, GMELIN. *White-fronted Goose*, PENNANT, Arct. Zool. Vol. 2, p. 548.
Anser id. BECHST. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 376. RICHARDSON, F. B. A. Vol. 2, p. 466. AUD. B. of A. Vol. 6, p. 209, pl. 380. NUTTALL, Man. Ornith. Vol. 2, p. 346. GIRAUD, Birds of Long island, p. 297.

CHARACTERISTICS. Brownish; beneath whitish varied with black; frontlet and throat white, margined with blackish: bill and feet carmine. Length, 27·0.

DESCRIPTION. Bill, at the base, equal to more than half its length. Teeth of the upper mandible triangular, distinct: five or six ranges of teeth on the palate. First quill shorter than the third. Tail short, rounded, of sixteen feathers.

COLOR, from the specimen in the Lyceum of Natural History: Frontlet and base of the lower mandible whitish or yellowish white, margined with blackish; the white beneath only apparent on the sides of the lower mandible. Head and neck brown: dorsal plumage lighter brown; the feathers edged with whitish. Secondaries tipped with white. Vent, upper and under tail-coverts white: wings and tail deep blackish brown; the latter tipped with white. Breast and belly with the sides whitish, blotched with deep black. Bill and feet carmine red; the latter tinged with yellowish. "In winter, beneath pure white" (*Temminck*).

Length, 27·0 – 28·0.

This is a very rare species in this State. The specimen described above was shot, May 9, at Babylon, Suffolk county. It ranges through the interior across the continent, and is found in the Western and Southern States during the winter. It ranges northwardly to the 67th parallel, and is more abundant on the eastern shores of this continent. Occurs in Europe and America.

THE SNOW GOOSE.

ANSER HYPERBOREUS.

PLATE CVII. FIG. 238.

(CABINET OF THE LYCEUM.)

Anas cerulescens, LINNÆUS, p. 198. *Snow Goose*, PENNANT, Arct. Zool. Vol. 2, p. 549.
A. hyperborea. WILSON, Am. Orn. Vol. 8, p. 76, pl. 69, fig. 3, and fig. 5 (young).
Anser hyperboreus. BONAPARTE, Ann. Lyc. N. Y. Vol. 2, p. 376. AUDUBON, B. of A. Vol. 6, p. 212, pl. 381. RICHARDSON, F. B. A. Vol. 2, p. 467. NUTTALL, Man. Orn. Vol. 2, p. 344. GIRAUD, Birds of Long island, p. 297. *Chen*, BONAPARTE, Geog. and Comp. List.

CHARACTERISTICS. Bill rising high on the forehead; sides of the bill with longitudinal furrows and indentations. *Adult*, white; quills black at the point; bill and feet red. *Young*, purplish brown; wing-coverts and rump bluish ash, more or less white with age. Length, 28·0.

DESCRIPTION. Bill almost conical, shorter than the head; the line of the gape curved. Tarsus 3·0. Tail short, rounded, of sixteen rounded feathers.

COLOR. *Adult*, white: quills, and their shafts toward the tips, black. Head (and occasionally the neck) light yellowish. Bill and feet red. *Young:* Head and neck white, with a few darker feathers on the nape. Upper part of the back dark brown; the feathers narrowly edged with light brown. Rump white, more or less barred and speckled with brown. Tail dark brown; the lateral tail-feathers bordered with pure white. Wing-coverts with a slaty hue: sides of the abdomen brown, tipped with white. Bill brownish: feet reddish.

Length, 27·0 – 31·0.

The *Snow Goose*, or *White Brant* and *Blue-winged Goose*, as it is occasionally called, is not very abundant on the coast of this State. It appears with us on its way south in the first week in November, and is again seen in February and March. Like the preceding, it ranges across the continent, and is found in the Western and Southern States in autumn and winter. It breeds in high northern latitudes, and ranges between the 26th and 75th parallels. Common to Europe and America.

THE BRANT.

Anser bernicla.

PLATE CVII. FIG. 239.

Anas bernicla, Linnæus, p. 198. *Brent Goose*, Pennant, Arct. Zool. Vol. 2, p. 551.
The Brant. Wilson, Am. Orn. Vol. 8, p. 131, pl. 72, fig. 1. Bonap. Ann. Lyc. N. Y. Vol. 2, p. 387. Rich- F. B. A. Vol. 2, p. 469.
Anser id. Audubon, B. of A. Vol. 6, p. 203, pl. 379. Nuttall, Man. Orn. Vol. 2, p. 359. Giraud, Birds of Long island, p. 293.

Characteristics. Blaekish ash: head, neck and breast blaek; a white pateh on eaeh side of the neck; beneath whitish; bill and feet black. Length, 23·0.

Description. Bill small, much shorter than the head, subconical, turned down at the tip: nasal groove elongated; nostrils sub-basal, elliptieal. Tibia bare for a short distanee. Tarsus 2·0, eompressed, and longer than the middle toe. Tail very short, much rounded.

Color. Head, neck, shoulders and upper part of the breast blaekish. Bill and feet black. Lower eyelid, spot on the chin, and a few tips of feathers on the sides of the neek, white. Dorsal plumage brown, margined with greyish. Quills, tertiaries, rump and tail greenish black. Sides of the rump, and the vent, and of the upper and under tail-eoverts white. Flanks barred with white and grey. *Female*, slightly smaller, but in no respeet different. *Young*, no white pateh on the side of the neck; plumage above and beneath barred with reddish brown.

Length, 22·0 – 25·0.

The *Brant* is considered as one of our most savory birds. In its transit from its breeding plaees near the Arctic sea, it appears in great numbers on the eoast of New-York in the first or second week in Oetober, and continues passing on to the south until Deeember. Some few have been observed to remain all winter. They are again seen with us in April and May, on their way north, when they are in the best eondition. Feed exclusively on *Zostera marina*, or eel-grass, and other marine plants. The history of its migrations is not yet complete. On the Atlantic eoast, it has been observed from 73° to 38° north. On the Paeifie, it appears to range from Columbia river, where it was seen by Mr. Townsend, to the 26th parallel. The Brant is eapable of domestieation, and is found on both eontinents.

HUTCHINS'S GOOSE.

ANSER HUTCHINSI.

Anser hutchinsi. RICHARDSON, F. B. A. Vol. 2, p. 470. AUDUBON, Orn. Biog. Vol. 3, p. 526. NUTTALL, Man. Orn. Vol. 2, p. 362. AUDUBON, B. of Am. Vol. 6, p. 198, pl. 377. GIRAUD, Birds of Long island, p. 292. LINSLEY, B. of Conn.

CHARACTERISTICS. Bill black, 1·5 in length. Head and neck deep black. A white kidney-shaped patch on the throat. Length, 26·0.

DESCRIPTION. Bill short, and very high at the base. Tail short, rounded, of sixteen feathers ("14," *Richardson*).

COLOR. *Adult:* Bill, feet and claws black. Head and upper two-thirds of the neck glossy black: a large subtriangular patch of white on each side of the head and neck. General color above brownish grey; the feathers edged with paler. Abdomen and lower tail-coverts white. Quills and tail-feathers deep brown.

Length, 25·0 – 27·0.

This species is usually taken for a dwarf variety of the *Wild Goose*, and was at first supposed by Dr. Richardson to be a variety of the *Brant*. It breeds along the shores of the Arctic sea. At some seasons, according to Mr. Giraud, it is quite abundant on the shores of Massachusetts, and has been shot in the Chesapeake. According to the same authority, it is not uncommon on the eastern part of Long island, in company with the Wild Goose, and is known under the name of *Mud Goose*. Mr. Linsley, in his Catalogue of the Birds of Connecticut, states that "it is not unfrequently taken there in the spring, and is called the *Southern Goose*, because it does not winter there." Some have supposed it to be the hybrid of the *Brant* and *Wild Goose*. It has been observed by Mr. Townsend on the Northwest coast.

(*EXTRA-LIMITAL.*)

A. leucopsis, BECHSTEIN. (AUD. B. of A. Vol. 6, p. 200, pl. 378.) *Barnacle Goose.* Dark ash; neck, upper part of the breast, and tail bluish black; face and beneath white; bill and feet black. Length, 23·0 – 27·0. *Northern regions.*

A. cinereus, MEYER. *Common Goose.* Light ash; beneath whitish; rump ash. Bill stout, orange; nail whitish. Introduced from Europe, and domesticated.

GENUS CYGNUS. Meyer.

Bill moderate, of nearly equal breadth throughout, subcylindric above, furnished at its base with a knob or fleshy tumor, convex above. Upper mandible unguiculated, and curved at the tip; the lower flat. Nostrils medial. Neck very long. Lores naked. Tarsus shorter than the middle toe. Tail short, graduated.

THE AMERICAN SWAN.

Cygnus americanus.

PLATE CV. FIG. 235.

Cygnus ferus. Sharpless, Cabinet of Natural History, Vol. 1, p. 181, pl. 16.
C. americanus. Id. Am. Jour. Sc. Vol. 22. Audubon, B. of A. Vol. 6, p. 226, pl. 384.

Characteristics. White: bill and feet black; top of the head tinged with brownish red. An orange patch, more or less distinct, from the anterior angle of the eye. Length, 56·0.

Description. Bill rather longer than the head. Tibia bare for an inch and a half. Second quill longest. Tail short, much rounded, and of twenty broad rounded feathers.

Color, as in specific phrase. The young light bluish grey; fore and upper parts of the head tinged with red; the bill reddish flesh-color. The naked space between the eye and bill of the adult, feathered in the young.

Length, 53·0 – 60·0.

This species was first shown to be specifically distinct from those of Europe by Dr. Sharpless. It breeds in high northern latitudes, and enters the United States through the interior, a few only appearing along the coast. In the uninhabited regions of Hamilton and Herkimer counties in this State, this species, as I was informed by trustworthy hunters, remains during the whole year, where it must necessarily breed. The outlet of Lake Paskungameh, or Tupper's lake, was specified as a spot to which they were particularly attached. The eggs are from five to seven in number, greenish. It is very common on the Chesapeake bay during the winter. Abundant also on the Pacific coast of America.

(*EXTRA-LIMITAL.*)

C. buccinator, Richardson. (Aud. B. of Am. Vol. 6, p. 219, pl. 382 and 383.) White: bill and feet black. Tail graduated, of 24 feathers. Head brownish red or white. *Young,* greyish white, tinged with yellow; head reddish brown; throat and lower eyelid white. Length, 53·0 – 68·0. *Ohio and South-Carolina. Northern regions. Northwest coast of America.*

ADDENDA.

The following two extra-limital species were noticed too late for insertion in the proper place :

Page 33, under *Caprimulgus carolinensis*, add

C. nuttalli. (Aud. B. of Am. Vol. 7, p. 350, pl. 495.) A band of white across the breast. The three lateral tail-feathers merely tipped with white. Length, 7·2. *Western Missouri & Northern territories.*

Page 138, add at the bottom

S. neglecta. (Aud. B. of Am. Vol. 7, pl. 489.) Colors as in *S. ludoviciana.* Tail even : central tail-feathers narrowly barred. Bill curved, and not as broad. Length, 10·0. *Upper Missouri.*

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OF THE

BIRDS.

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J. M. Hill

Lith of Endicott New York

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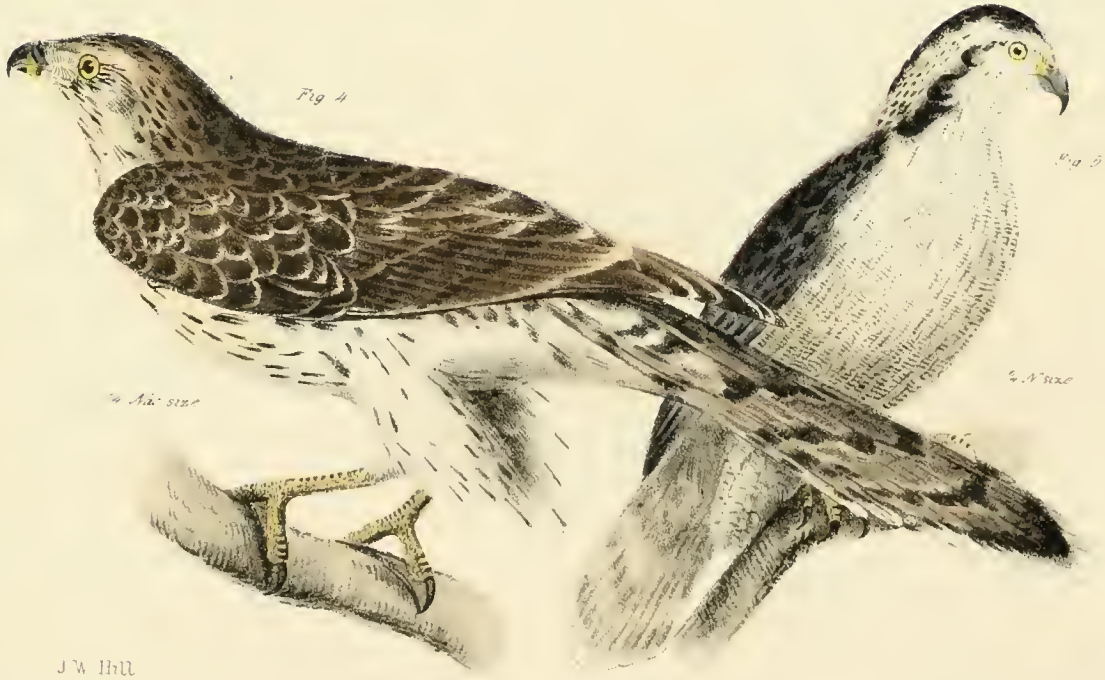


Fig 4

Fig 5

¼ Nat size

¼ Nat size

J W Hill

Lith of Endicott N York

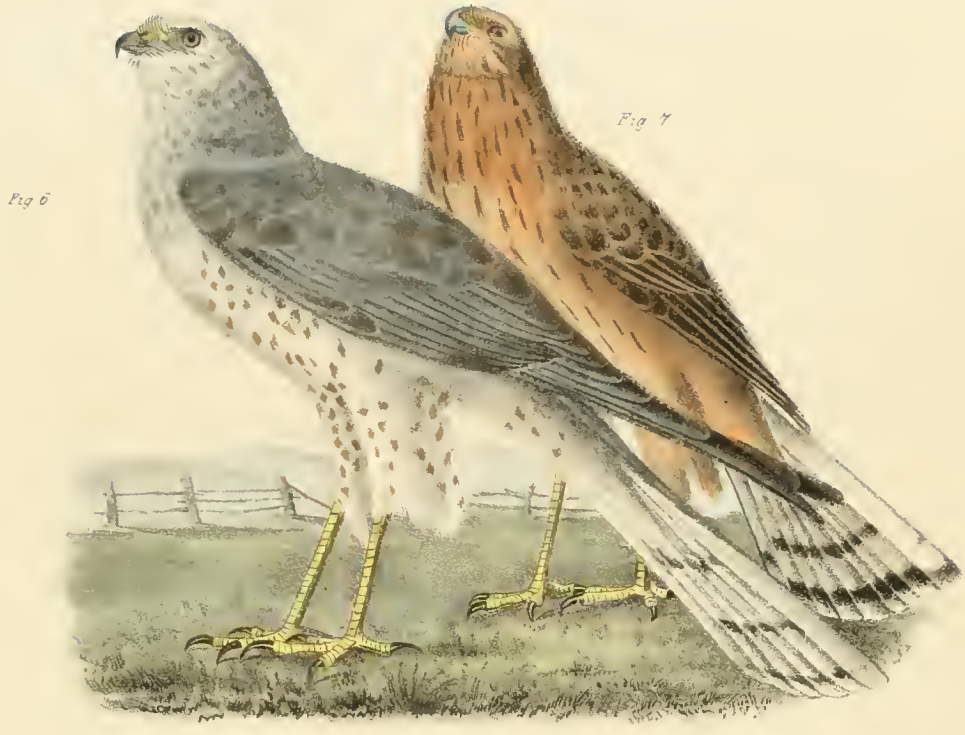


Fig 6

Fig 7

1/3 Nat size

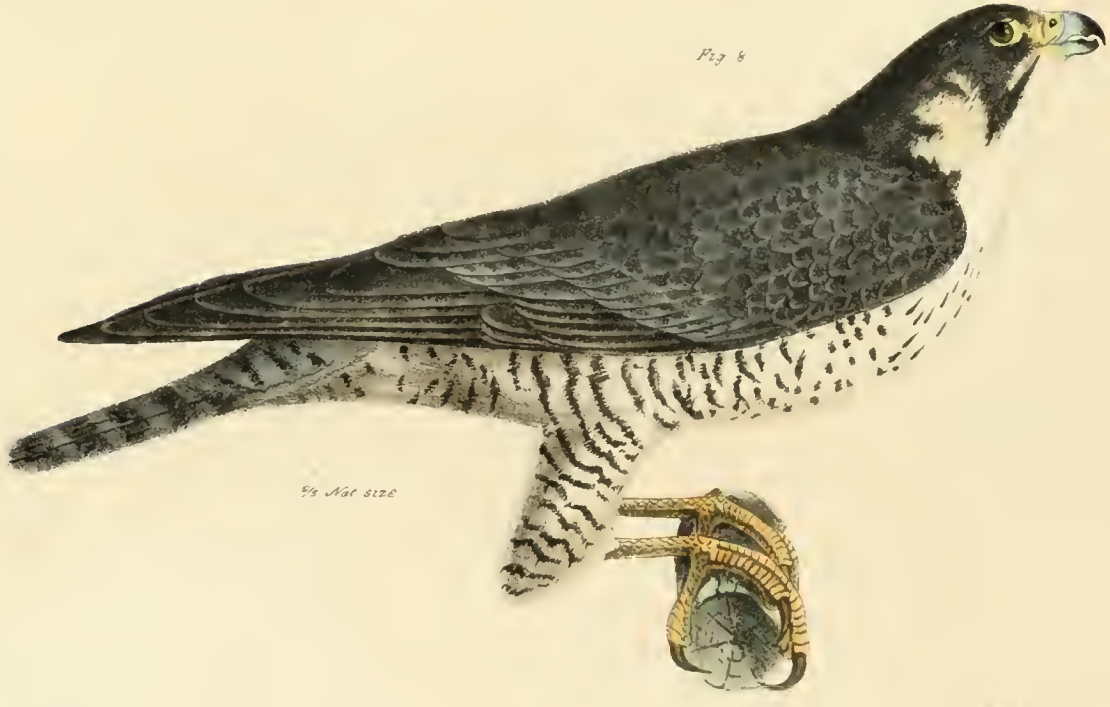


Fig 8

1/3 Nat size

J. W. Hill

Imp. of Engd. New York

Fig 9

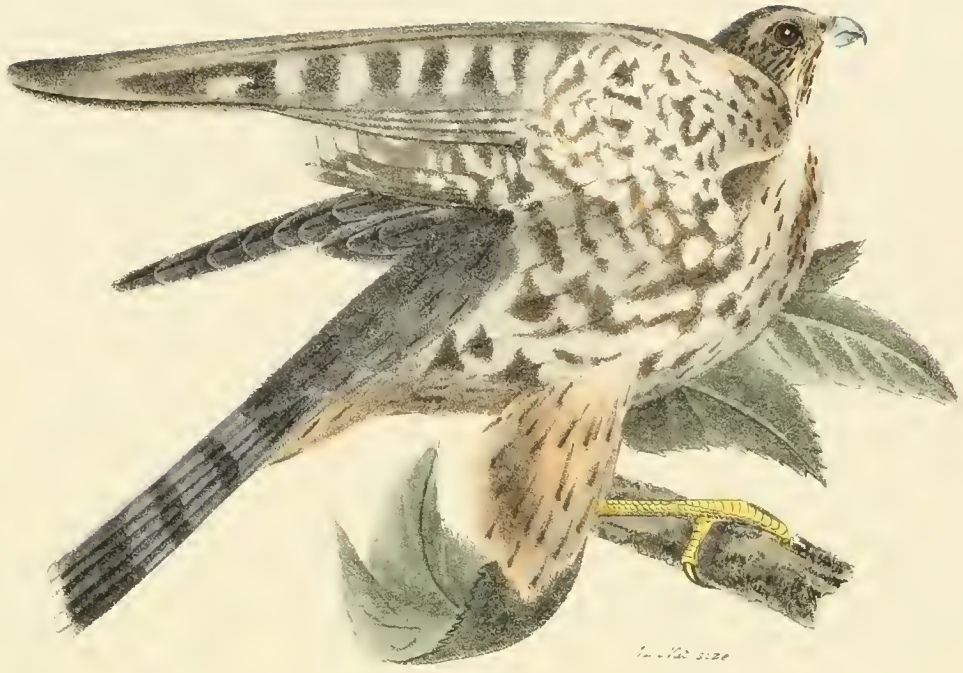
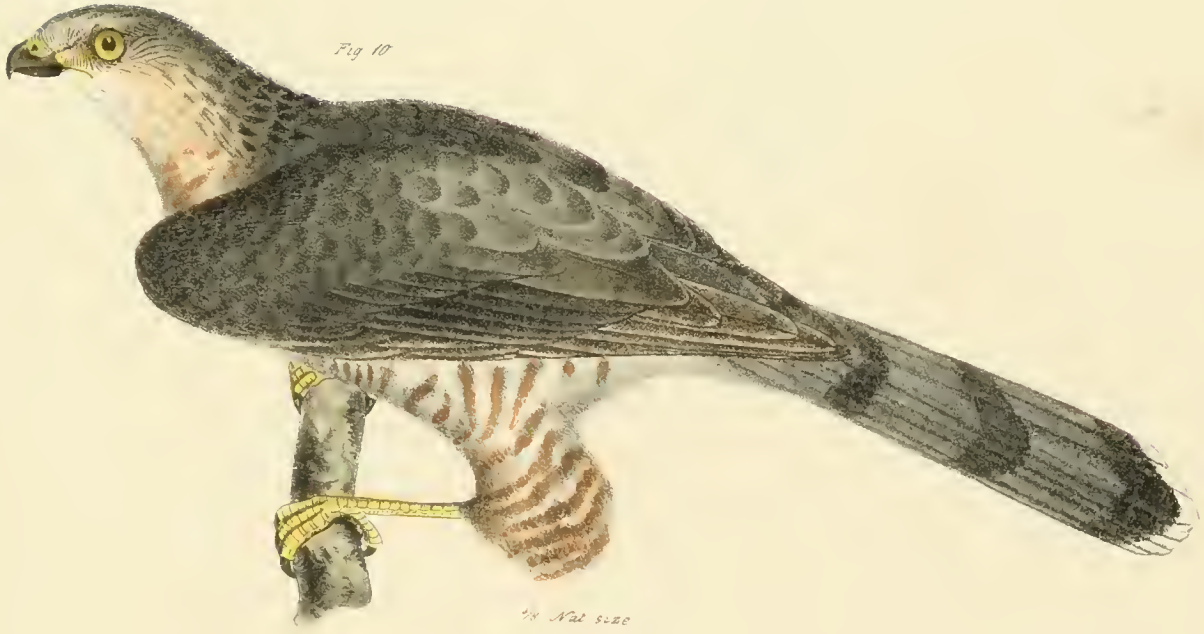


Fig 10



J. W. Hill

Lith of Endicott New York

Fig 11

¼ Nat size

Fig 12

J.W. Hill

⅛ Nat size

Lith. of Endicott, New York.

Fig 16

¼ Nat size

Fig 17

⅛ Nat size

Fig 15

Plate 7

Fig 16

J.W Hill

lith of Endicott, New York

Fig 17

Plate 5

Fig 18

J. W. Hill

Lith. of Endicott, New York

Fig 20

Fig 19

J W Hill

Endicott New York

Fig 28

3 Nat size

Fig 29

6 Nat size

Lith of Endicott New York

Plate I F.

Fig. 50

½ Nat size

Fig. 51

½ Nat size

J W Hill

Lith et Endicott Sc. N. Y.

Fig 32

Plate 15.

♀ 5 Nat. size

Fig 33.

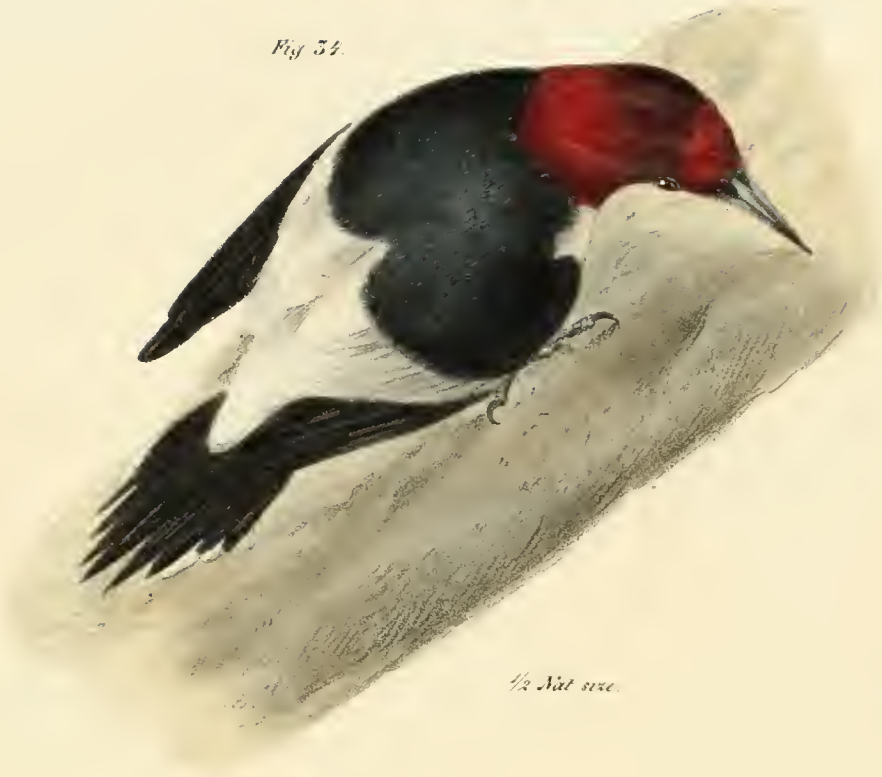
♀ 8 Nat size

J W Hill

Lith of Endicott New York

Plate 16.

Fig 34.



½ Nat size.

Fig 35

½ Nat size.

J W Hill

Lith of Endicott, New York

Fig 56

2/3 Nat size

Fig 57

3/7 Nat size

J.W. Hill

Lith. of Endicott, New York

Fig 58

3/8 Nat size

Fig. 59

1/2 Nat size

J.W.Hill

Lith of Endicott New York

Fig 41

Fig 40

Plate 19.

½ Nat size

Fig 42

J W Hill

⅗ Nat size

Lith of Endicott, New-York

Fig 43.

Plate 20.

¾ Nat. size

Fig 44

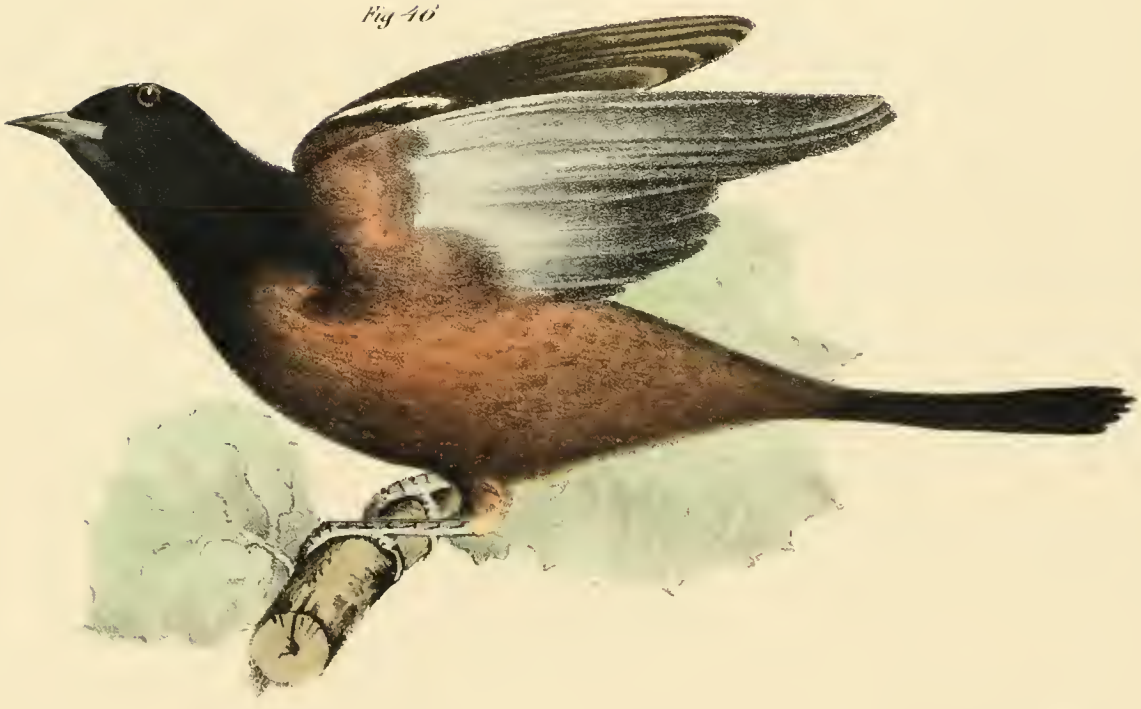
J.W. Hill

Lith. of Endicott New York

Fig. 45

3/5 Nat size

Fig 46



J W Hill

Lith of Endicott New York

Fig 27

½ full size

Fig 28

¾ full size

J.W. Hill

Lith. & Engraved New York

Fig. 49

½ Nat size

Fig 50

½ Nat size

J.W.Hill

Lith of Endicott New York

Fig 51

1/5 Nat. size

Fig 52

1/3 Nat. size

Fig 53

1/3 Nat size

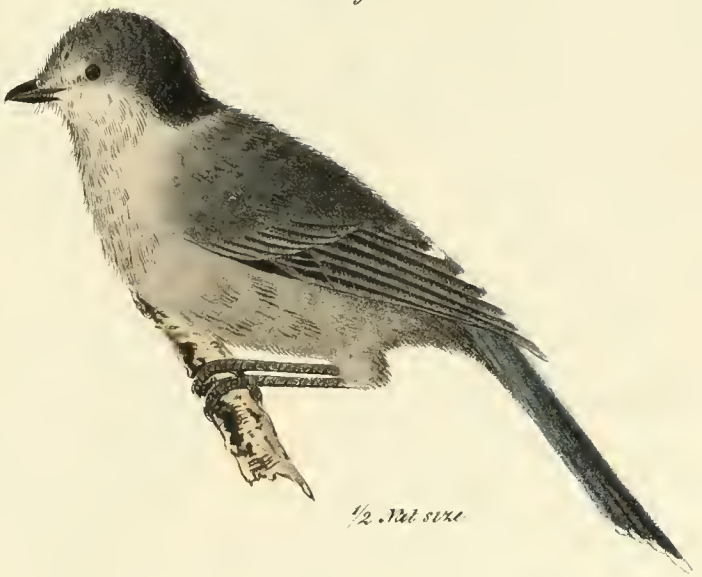
J. W. Bill

Lith. of Endicott New York

Fig 54

½ Nat size

Fig 55



½ Nat size

J.W.Hill

Lith. of Endicott. New York

Fig. 56

3/4 Nat. size.

Fig. 57

6/7 Nat size

J.W. Hill

Lith. & Pub. by Endicott New York

Fig 58

⅙ Nat size

Fig 59

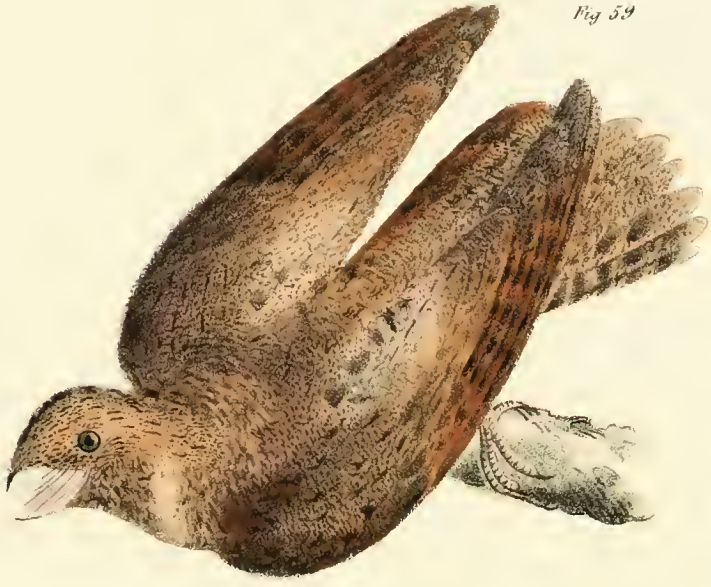


Fig 60 ⅓ Nat size

J W Hall

⅓ Nat size

Lith of Endicott New York

Fig. 67

3/4 Nat size

Fig. 62

J.W. Hill

Lith by Endicott, New York

Fig. 63

⅓ Nat size.

Fig 64

J W Hill

5/9 Nat size

Lith of Endicott New York

Fig 65

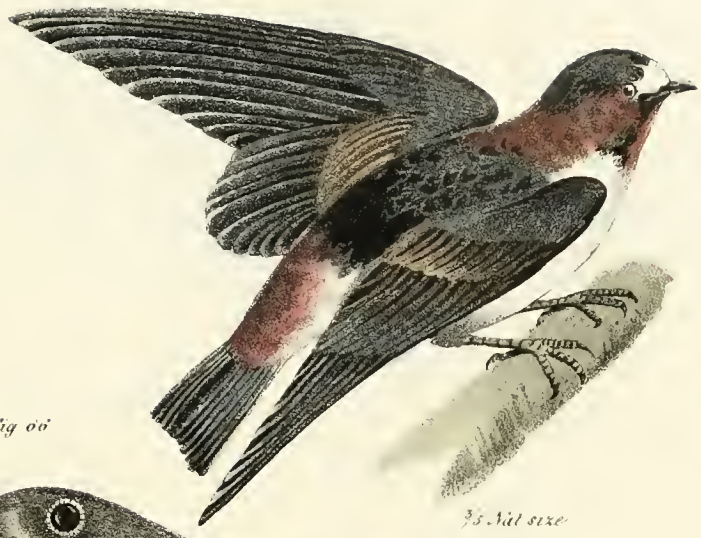
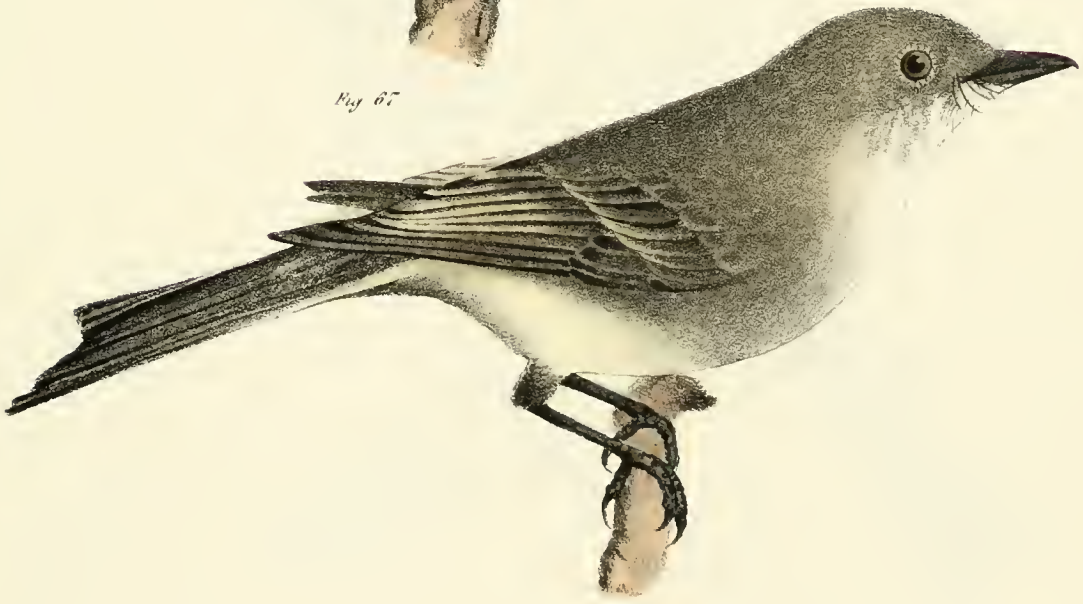


Fig 66

3/4 Nat size

Fig 67



J.W. Hill

Lith of Endicott New York

Fig 68

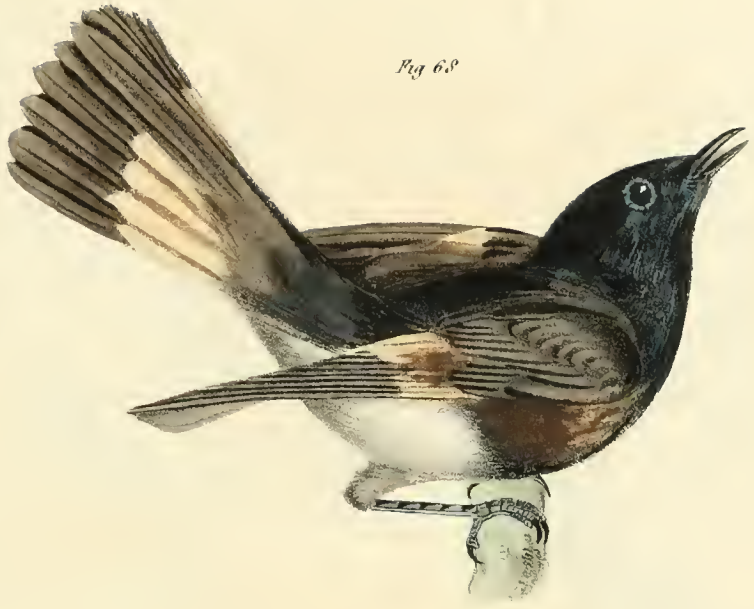


Fig 69

Fig 70

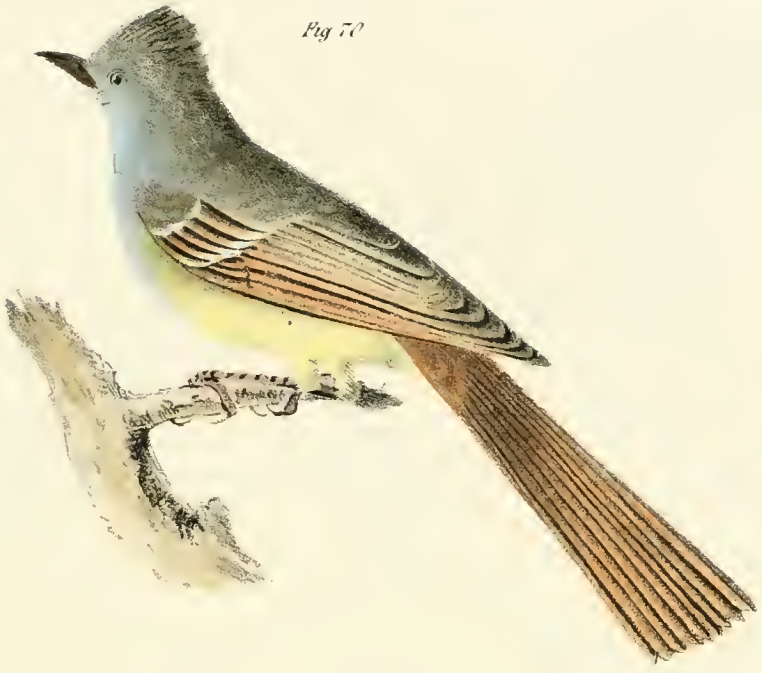


Fig. 71

J.W. Hill

Lith. by Endicott New York

Fig 74

¾ Nat size

Fig 75

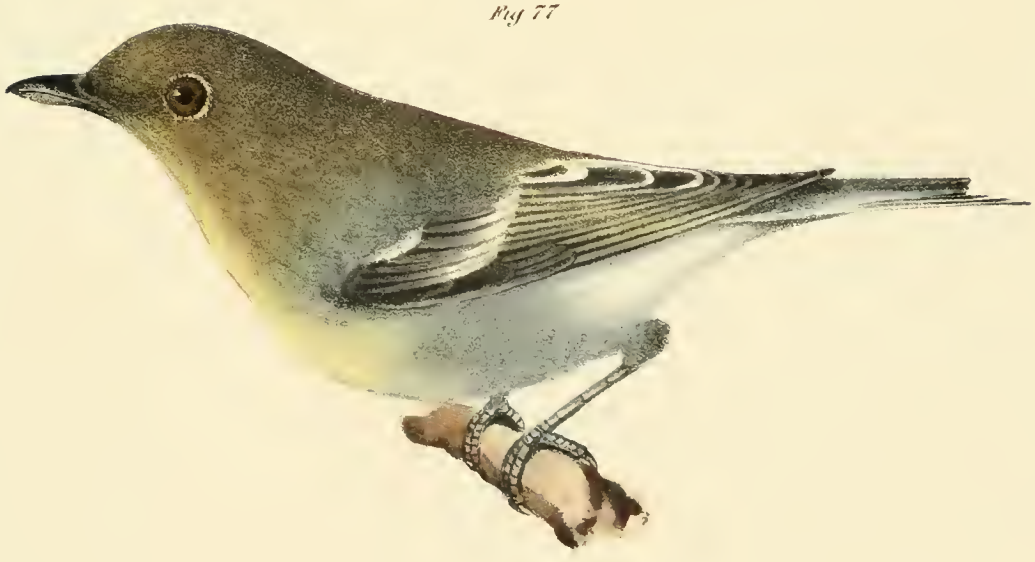
Fig 74

Fig 75

Lith by Endicott New York

Fig. 76

Fig 77



J. W. Hill

Lith by Endicott, New York

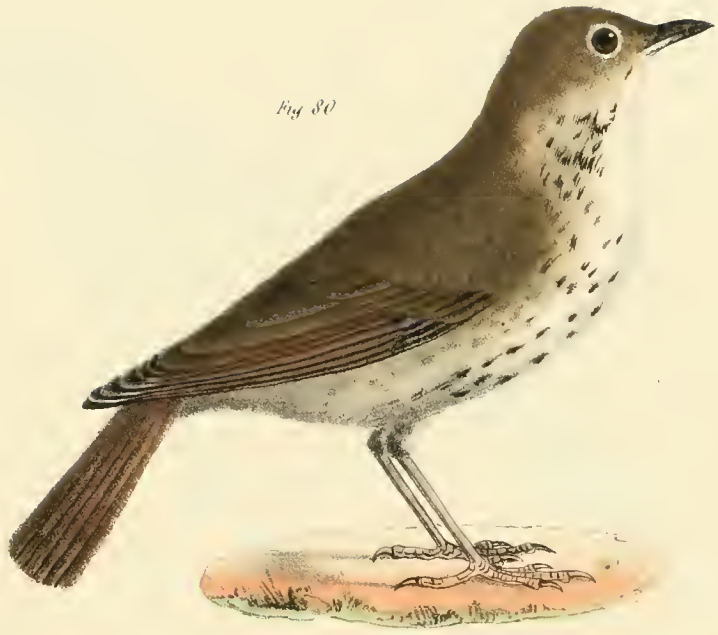
Fig 78

Fig 79

J W Hill

Lith by Endicott New York

Fig 80



⅔ Nat size

Fig 81

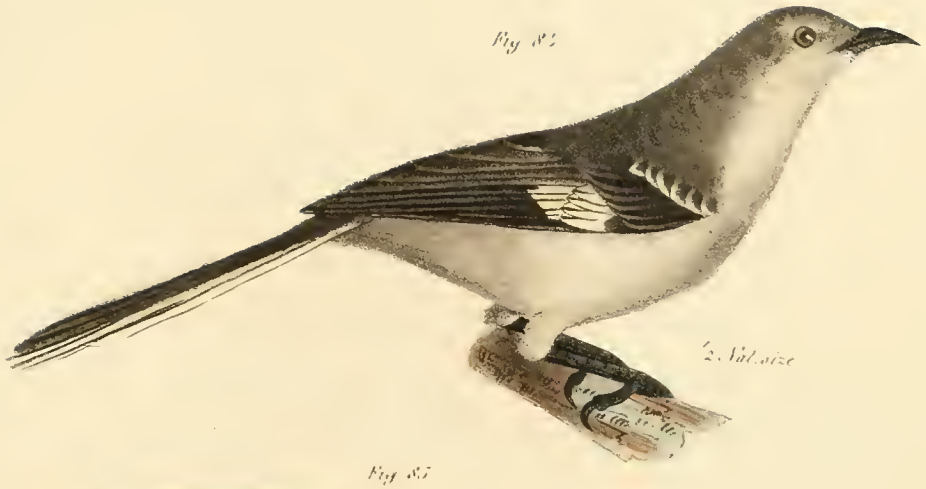
2/3 Nat size

Fig 82

Fig 83

2/3 Nat size

Fig 84

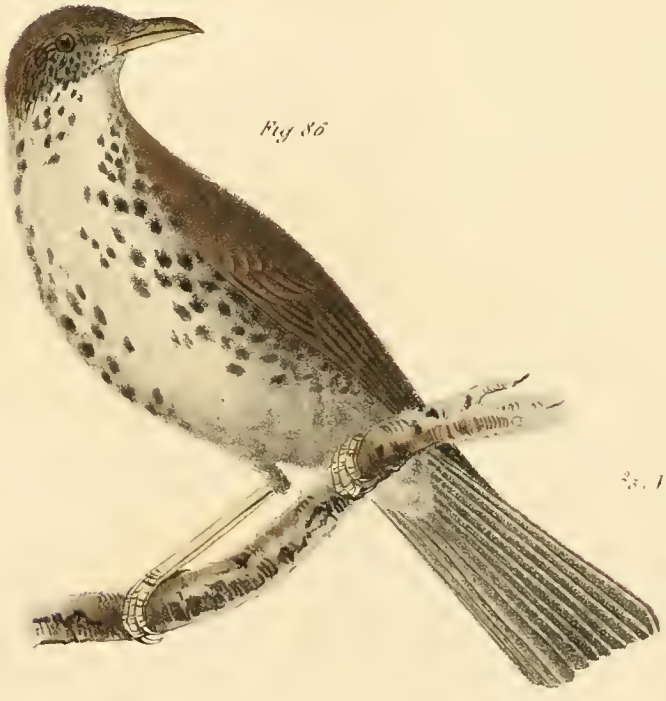


½ Nat size

Fig 85

¾ Nat size

Fig 86



¾ Nat size

J. W. Hill

Lith of Endicott New York

Fig 87

Fig 88

J. W. Hill

Lith of Endicott, New York

Fig 89

Fig 90

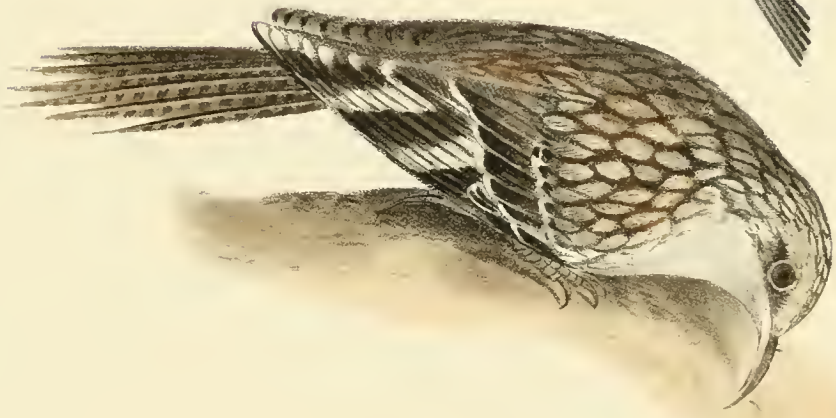


Fig 91

W. Hill

Lith. of Endicott New York

Fig. 92

Fig 93

Fig 94

J W Hill

Lith of Endicott New York

Fig 95

Fig 96

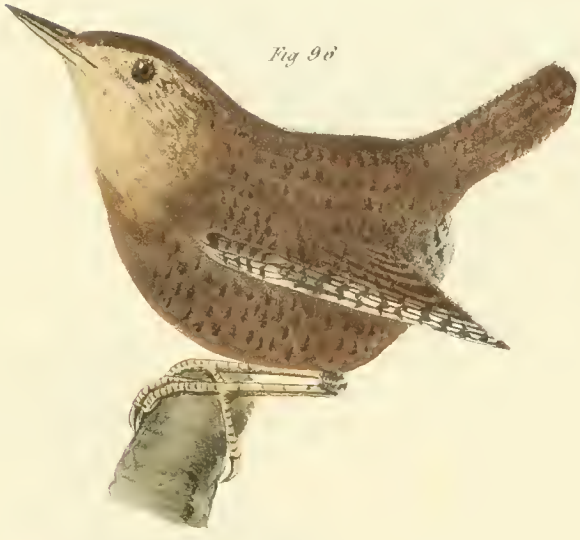
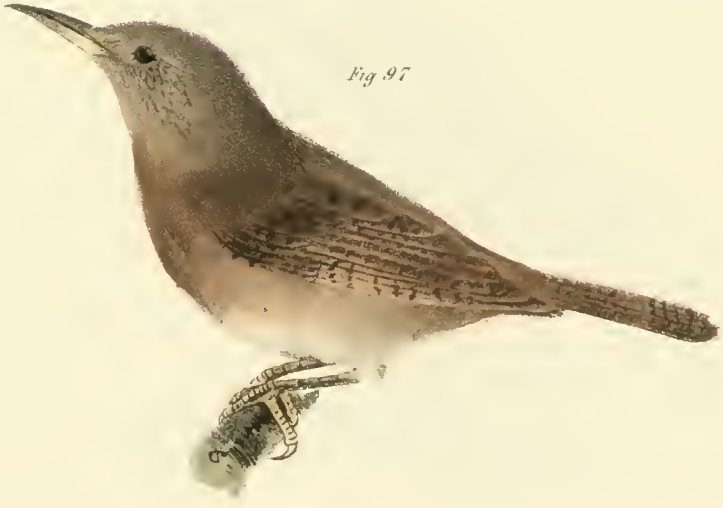


Fig 97



T. Endsor New York

Fig 98

3/4 Nat size

Fig 99

J W Hill

Smith & Maxwell New York

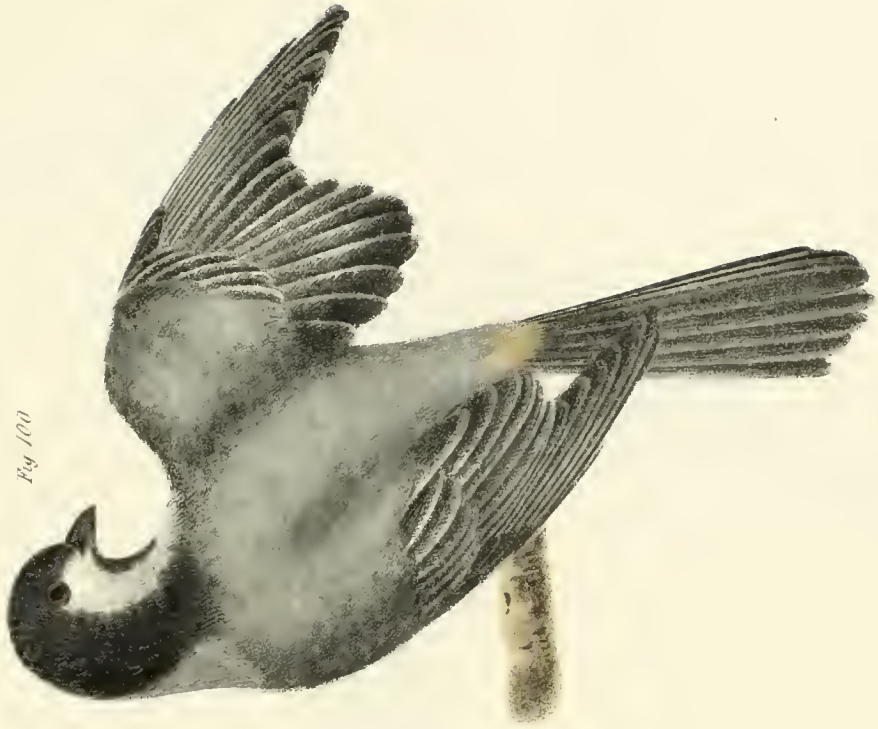


Fig 100

Fig 101

Fig 102

Fig 103

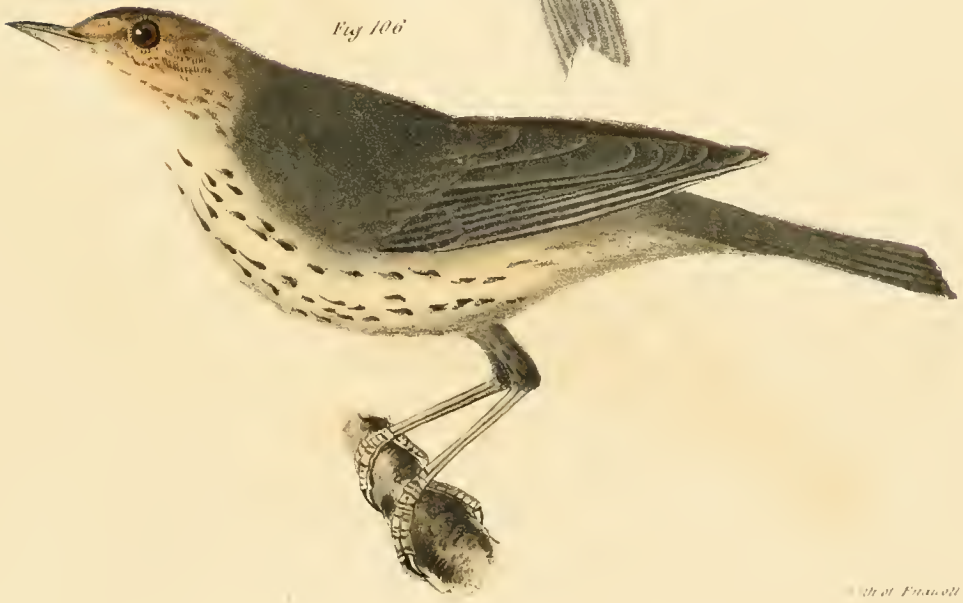
J.W. Hill

Lith. of Endicott, New York

Fig 104

Fig 105

Fig 106



W. Hy.

Pub. by Finnell New York

Fig 107

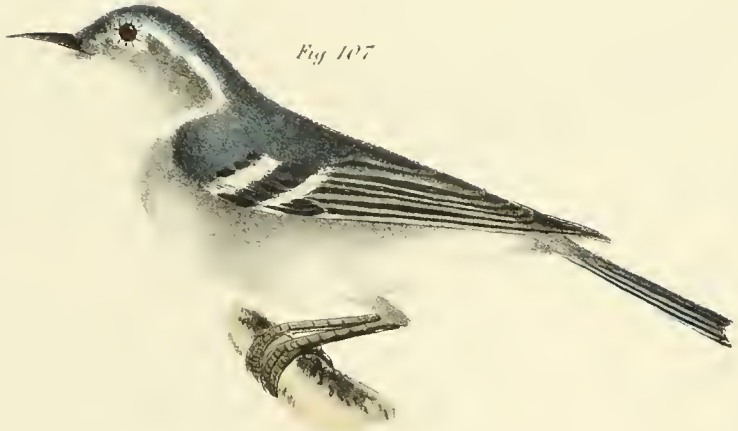


Fig 108

Fig 109

J.W. Hill

Lith. of Endicott New York

Fig 110.

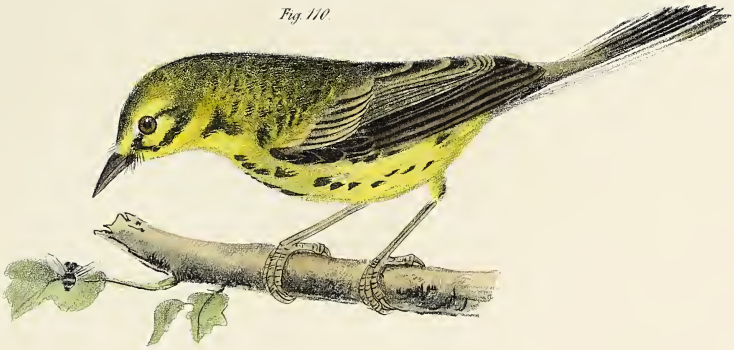


Fig 111

J.W.Hill.

Lith of Endicott. New York

Fig 112

Fig 113

Fig 114

Fig 115

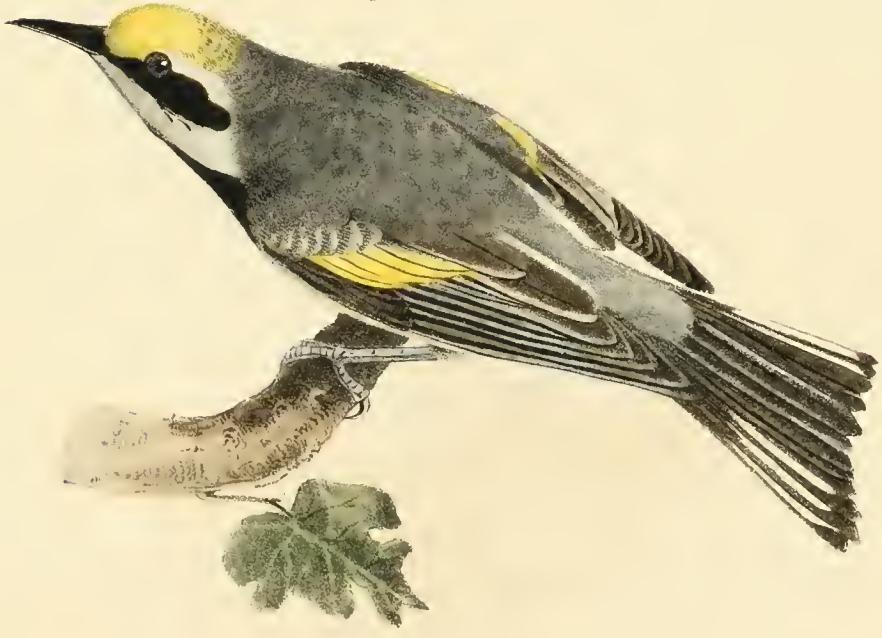
Fig 116

W Hill

Lith of Endicott N Y

Fig 117

Fig 118



J. W. Hill

Lith. of E. Bisbee, N.Y. New York

Fig. 119

Fig. 120

Fig 121

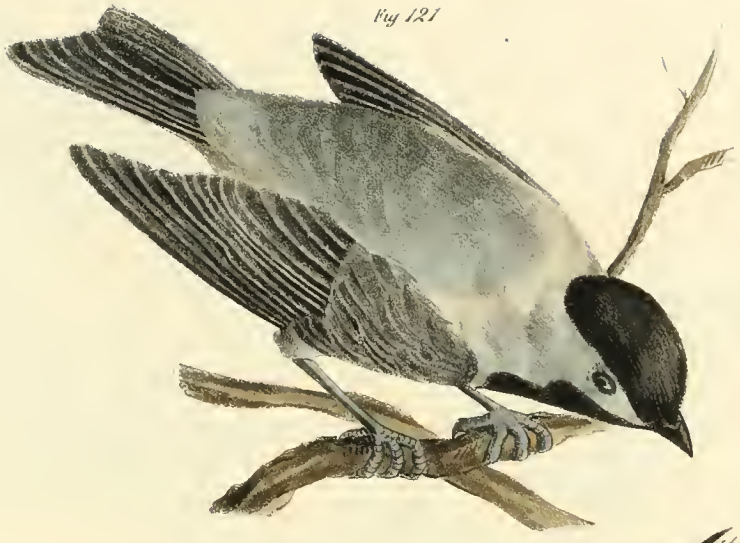


Fig 122

Fig 123

J W Hill

Lith of Endicott, New York

Fig 124

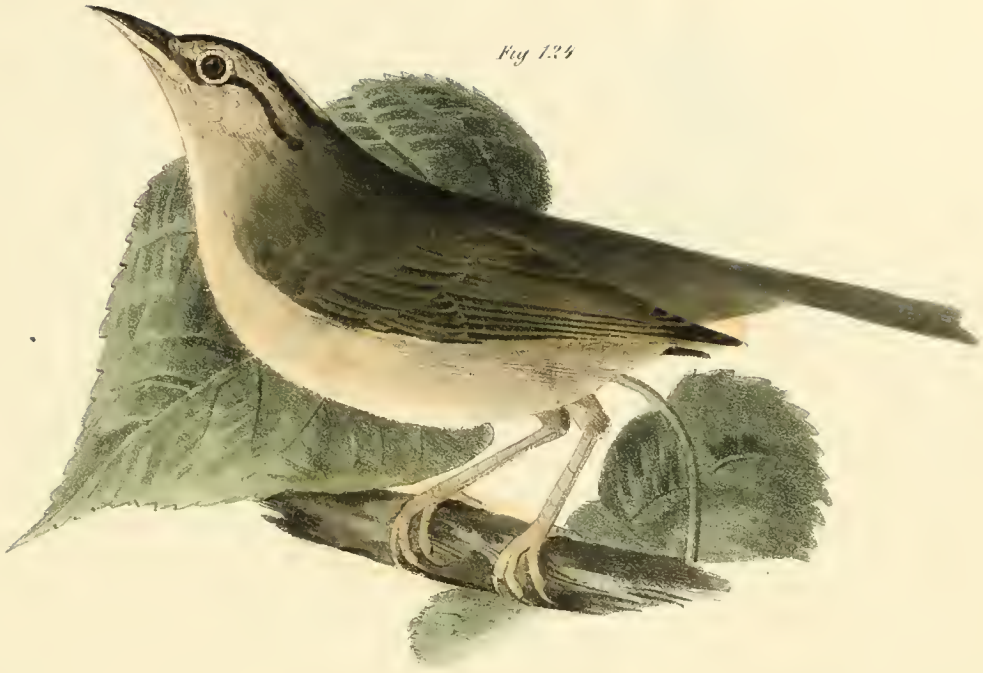


Fig 125

J.W.Hill

Lith of Endicott New York

Fig 126

Fig 127

J W Hill

Lith & Endicott New York

Fig 128

Fig 129

Fig 130

J W Hill

Lith of Endicott New York

Fig 131

Fig 132

Fig 133

J.W.Hill

Alex. Ellicott New York.

Fig 154

Fig 155

Fig 156

J.W. Hill

Lith of Endicott New York

Fig 157

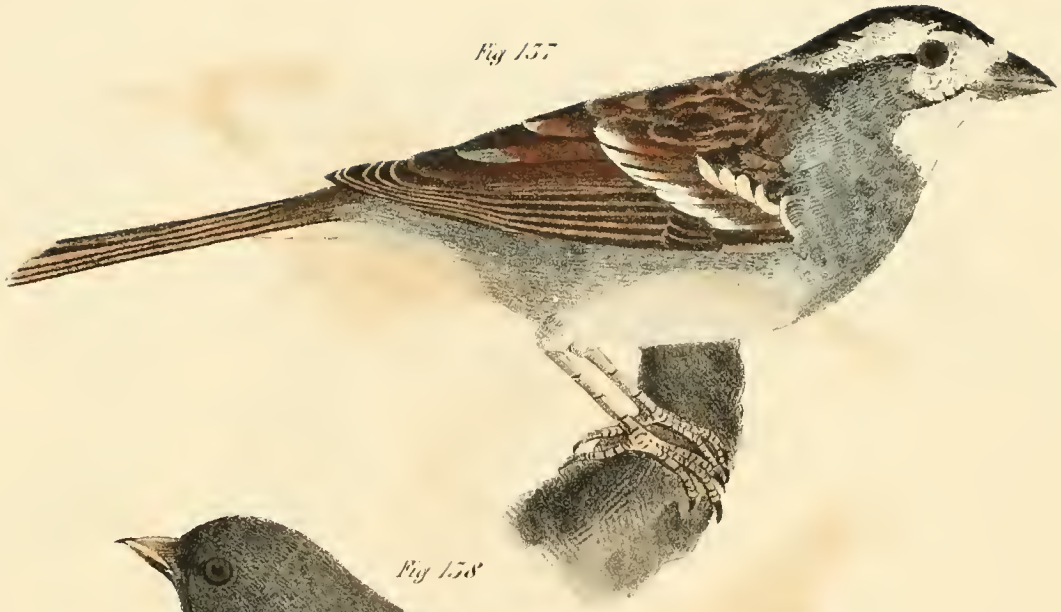


Fig 158

Fig 159

J.W. Hill

Lith. of Endicott, New York

Fig 170

Plate 61.

Fig 171

J.W.Hill

Lith of Endicott. New York

Fig 142

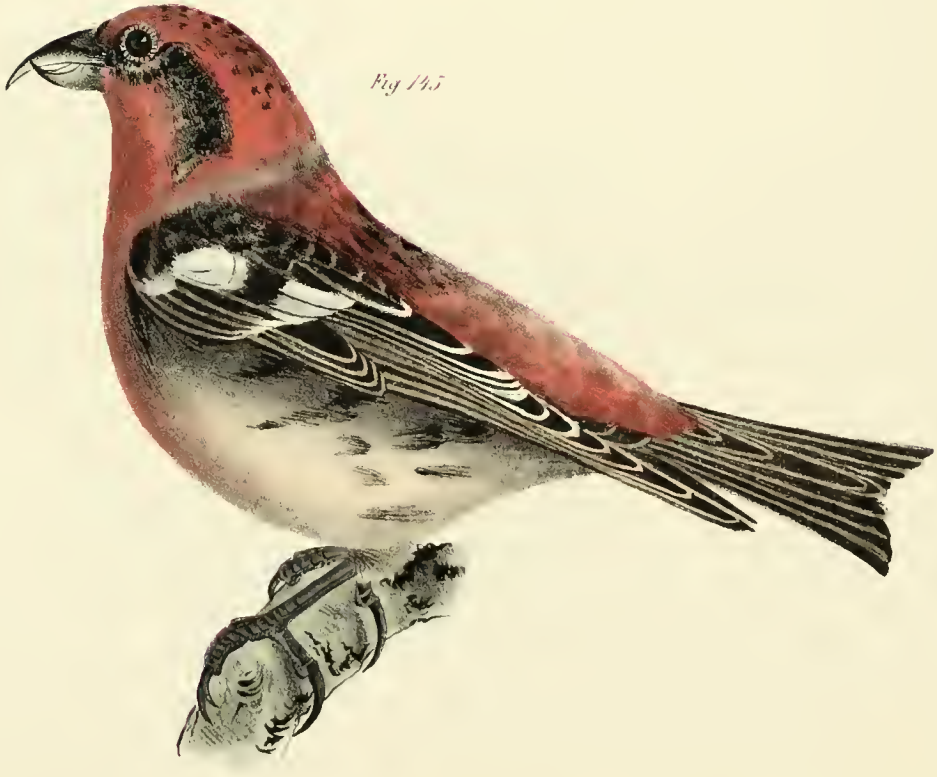
Fig 143

J.W. Hill

Lith et Engraved New York

Fig 144

Fig 145



J.W. Hill

Pub. at Cincinnati New York

Fig 196

Fig 197

3/4 Nat size

J W Hill

Lith of Endicott New York

Fig 148

♀ Nat size

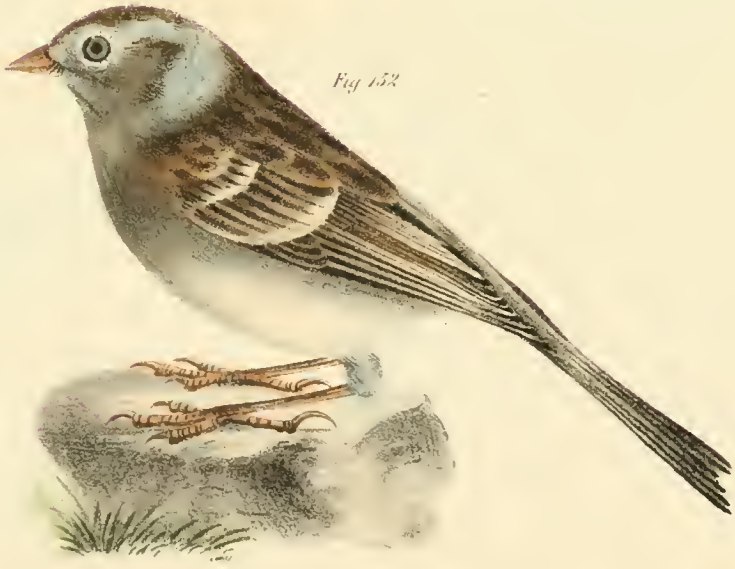
Fig 149

Lith et Endicott New Yk

Fig 150

Fig 151

Fig 152



J W Hill

Lith of Endicott New York

J.W.Hill

William Bridgens New York

Fig 156

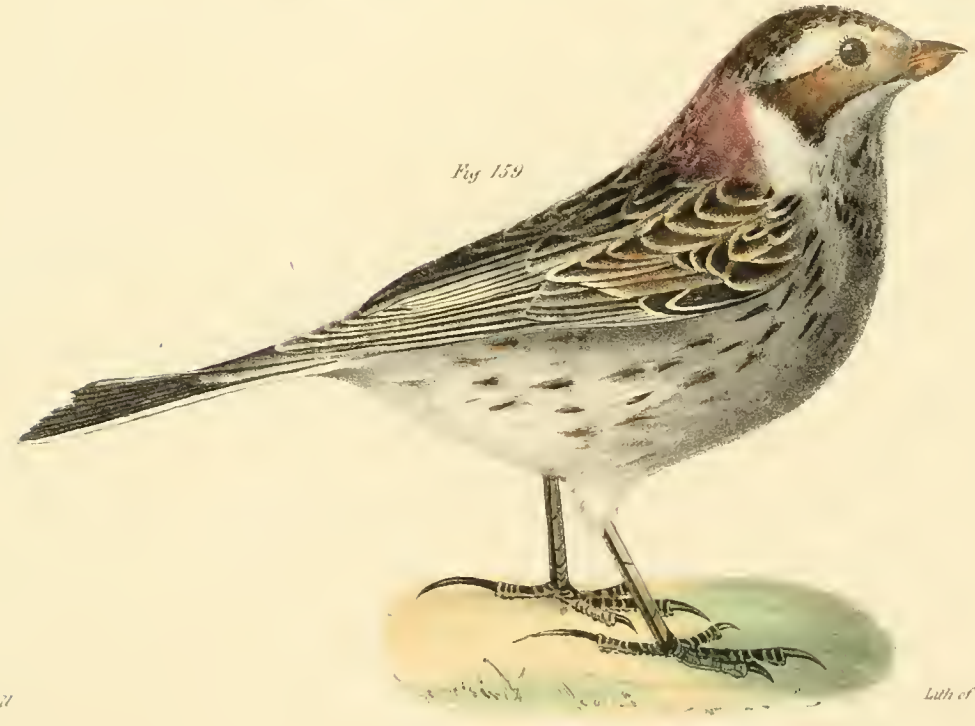
Fig 157

J.W. Hill

Lithet Endicott New York

Fig 158

Fig 159



J. W. Hill

Lith of Endicott, New York

Fig 1a

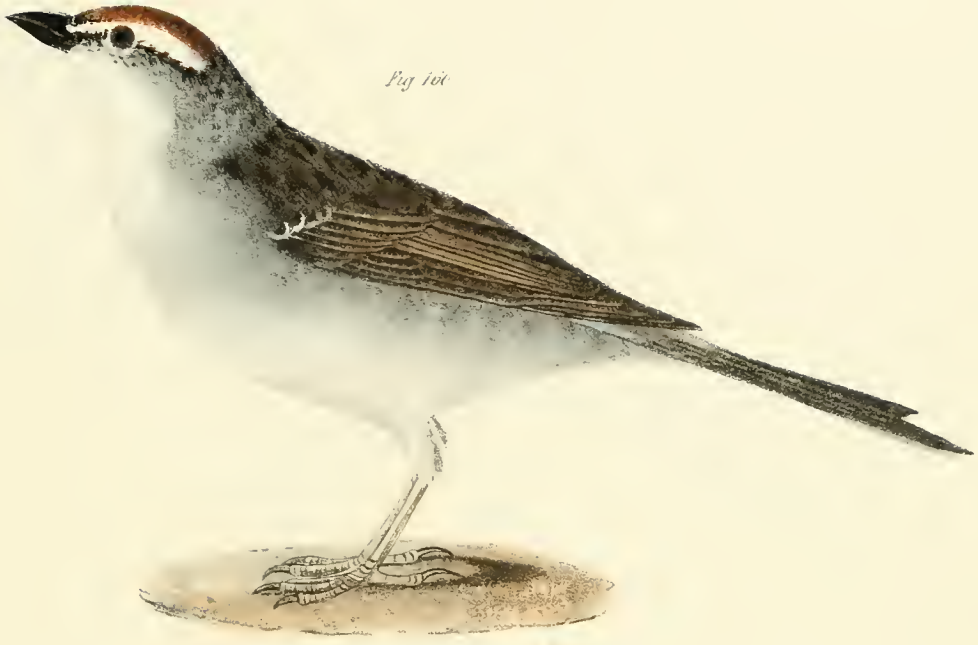
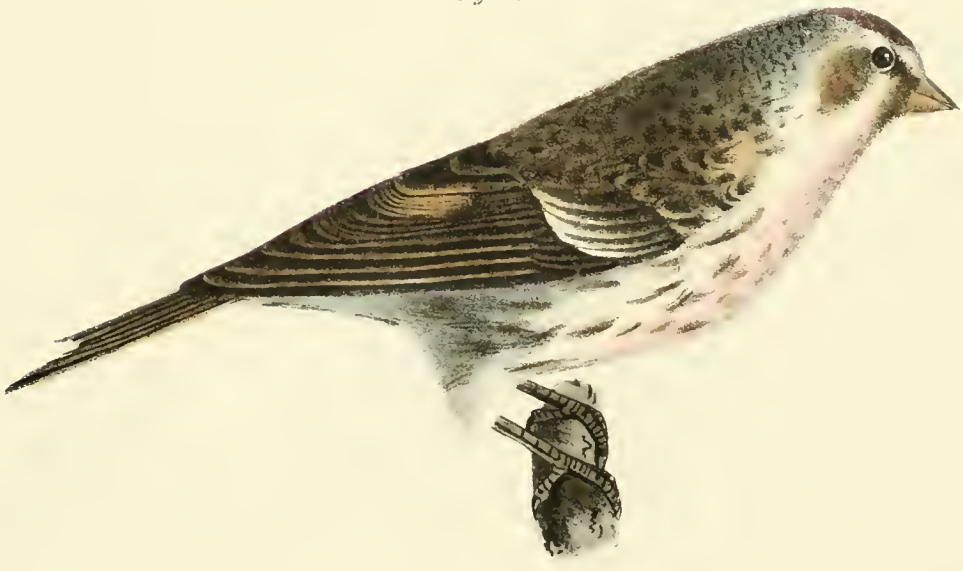


Fig 1b



J.W.Hill

...ith et Fridicott Newyork

Fig 161

Fig 162

H. Ward

Lith. of Pendleton New York.

Fig. 163

Fig 164

ublished by Endicott New York

Fig 165

3/4 Natural size

Fig 166

Wilson

Lith. of Endicott New York

Fig 166

½ Nat size

Fig 167

J.W.Hall

⅝ Nat size

Lith of Endicott N.York

Fig 1038

½ Nat size

Fig 1039

½ Nat. size

J.W.Hill

Fig 174.

Fig 175

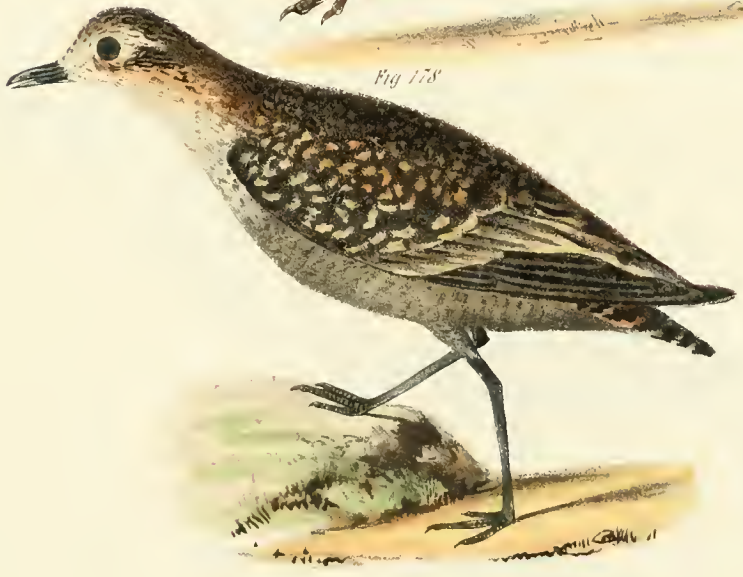
Fig 176

½ Nat size

Fig 177

¼ Nat size

Fig 178



⅓ Nat size

W.H.D.

Lith. of Endicott New York.

Fig 182

½ Nat size

Fig 183

T.W. Hea

Lith. Printed by Sarony & Co. New York

W. Hill

½ Full size

Fig 187

1/6 Nat size

Fig 188

1/4 Nat size

W. Hill

Lith of Havell

Fig 189

½ Nat size

Fig 190

2/3 Nat size

J. W. Hill

Lith of Endicott New York

Fig 191

½ Nat size

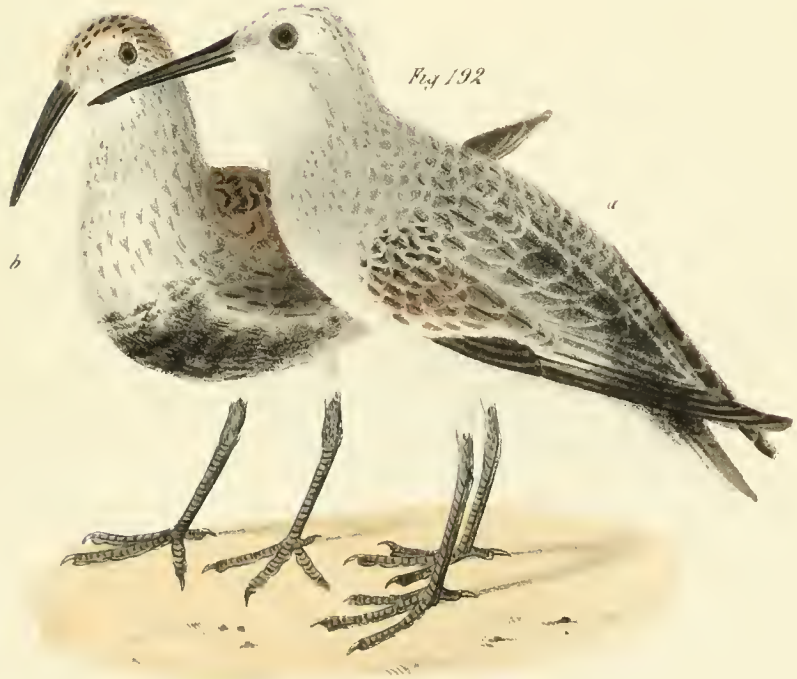


Fig 192

½ Nat size

Fig 193

½ Nat size

Fig 194

½ Nat size

J.W.Hill

Lith. of Endicott New York

Fig 195

¾ Nat size

Fig 196

Fig 197

2/3 Nat size

Fig 198

3/5 Nat size

Fig 199

Nat. size

Fig 200

¼ Nat. size

J.M.Hill

Lith. et Endiatt N.York.

Plate 89.

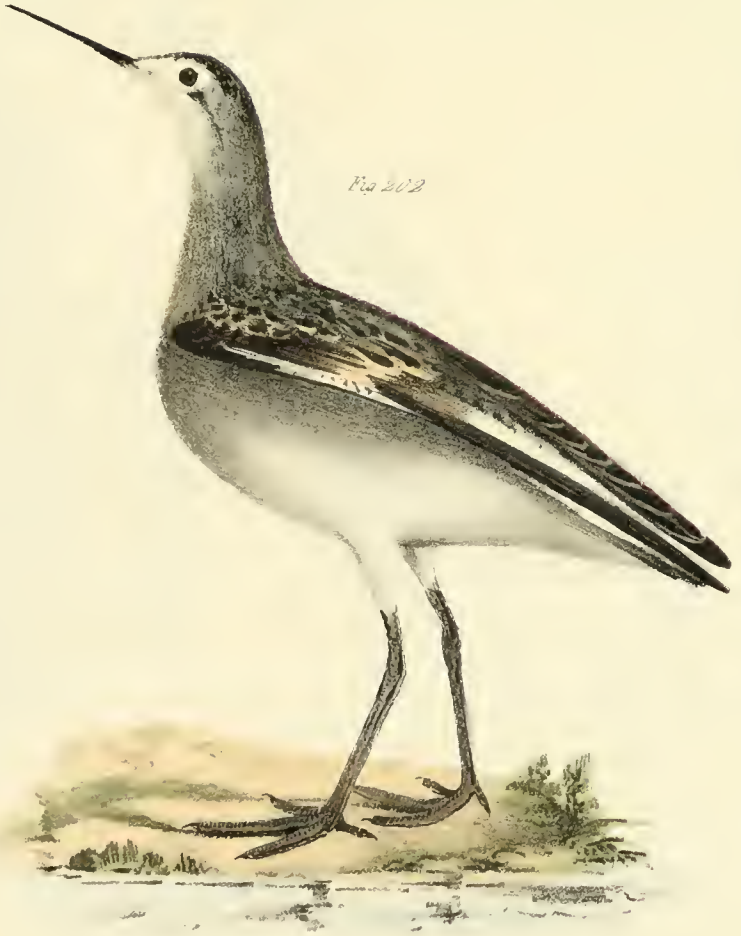


Fig 202

⅔ Nat size

Fig 201

J. W. Hill

Lith. & Endicott New York

Fig 203

Nat size

Fig 204

Nat size

J.W.Hill.

Lith. of Endicott New York.

Fig 205.

⅓ Nat size

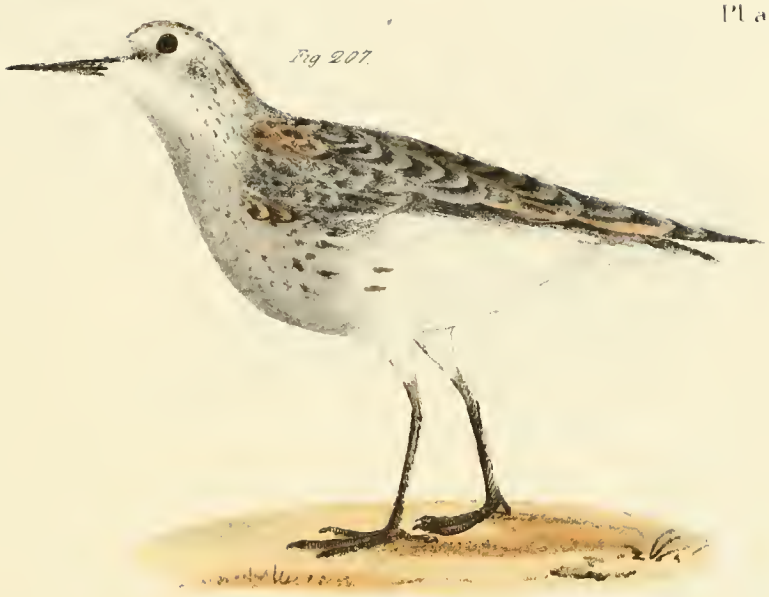
Fig 206

⅔ Nat size

A. Hill

Lith of Endicott New York

Fig 207.



3/4 Nat size

Fig 208

Nat size

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Fig 209

1/3 Nat size

Fig 210

1/2 Nat size

J.H.S. Hill

Lith of Endicott New York

Fig 211

Nat size

Fig 212

Nat size

J. W. Hill

Lith. of Endicott New York

Fig 213

½ Nat size

Fig 214

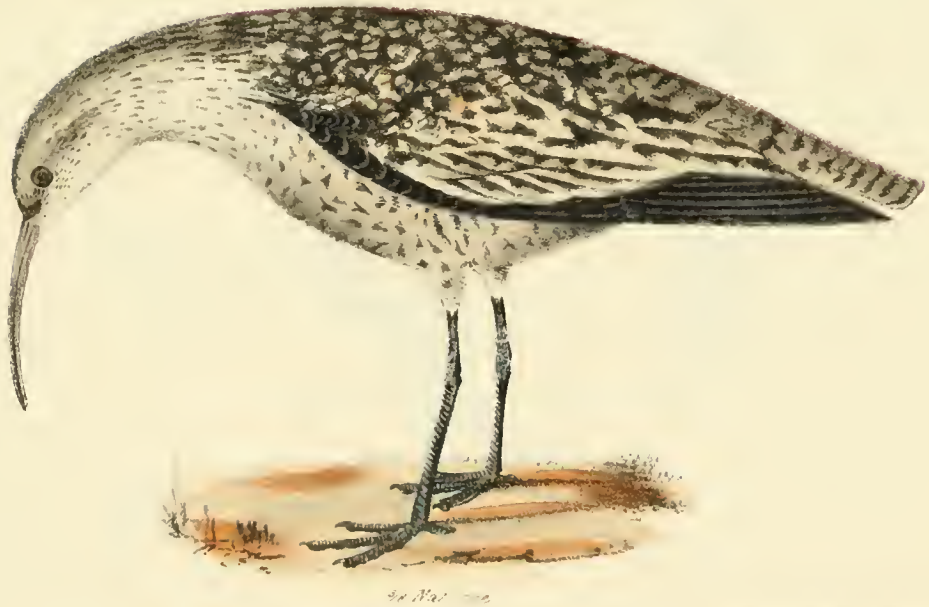


Fig 215

¼ Nat size

Fig 216

¼ Nat size

Fig 217

½ Nat size

Fig 218

½ Nat size

J.W. Hill

Lith of Endicott New York

Fig 219

½ Nat size

Fig 220.

½ Nat size

J.W.Hill

Lith. et Endicott. New York

Fig 221.

½ Nat. size

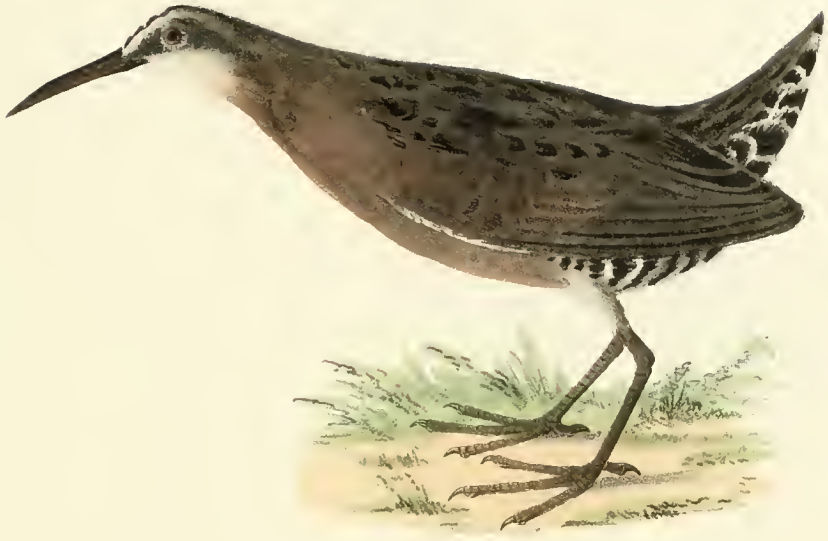
Fig. 222

½ Nat. size

J.W.Hill.

Lith. of Endicott, New York.

Fig 223.



½ Nat size.

Fig 224

½ Nat size

T. W. Hill

Lith. of Endicott New York.

Plate 101.

Fig 225.

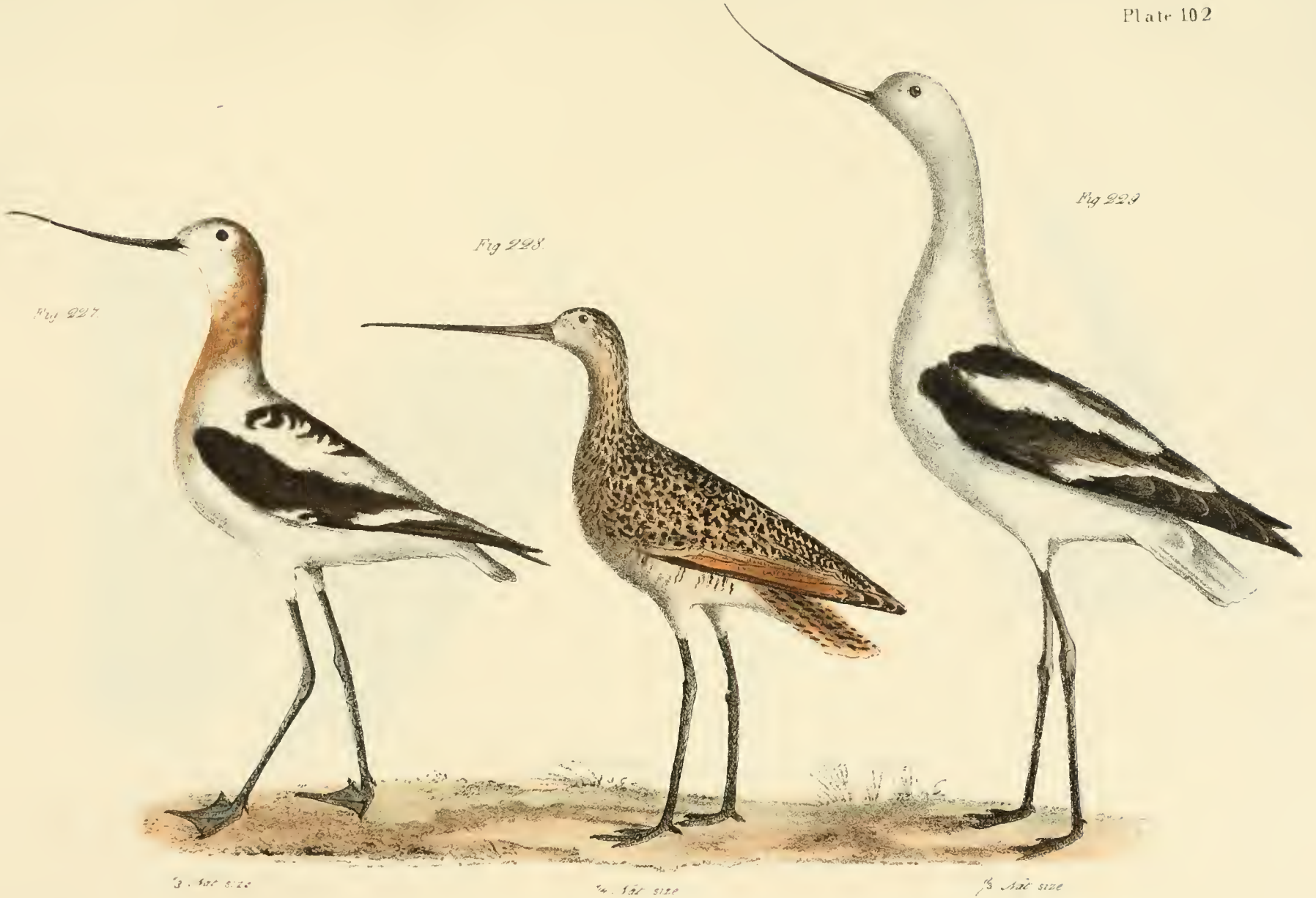
¾ Nat. size

Fig 226

½ Nat. size

J. W. Hill

Lith. et Printed by Bradstreet, New York



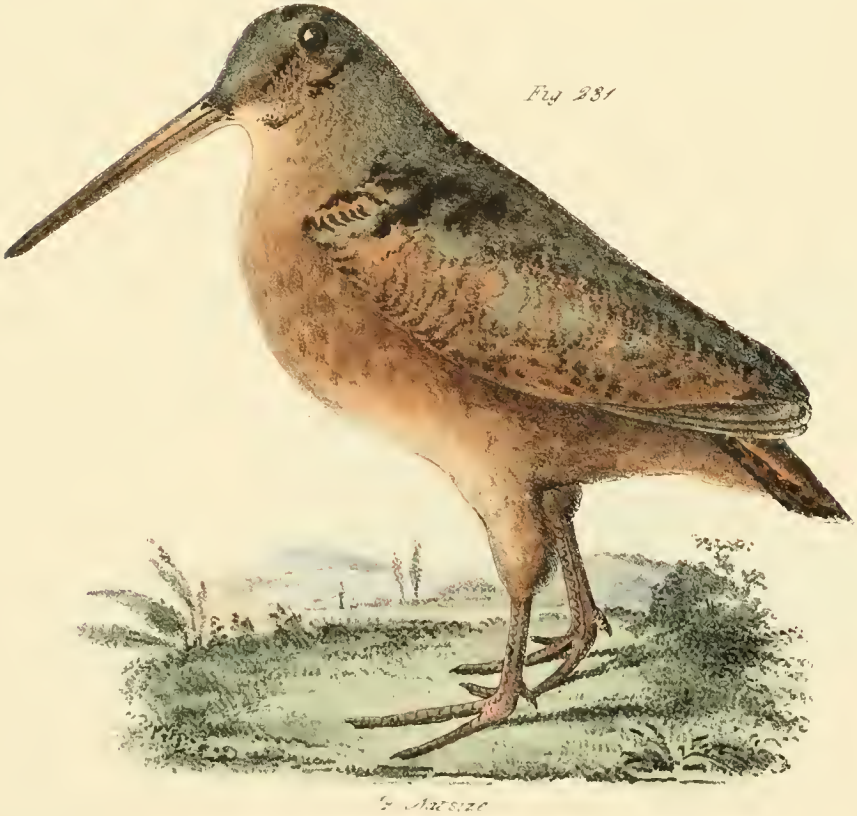
J. & E. Hill

Lith of Endicott, New York

Fig 280

½ Nat size

Fig 281



½ Nat size

J. Hall

Lith. of Endicott, City York

Fig 232

Full size

Fig 233.

Lith. of Endicott New York

J. W. Hill

Fig 234

Fig 235

Fig 2 ♂

¼ Nat size

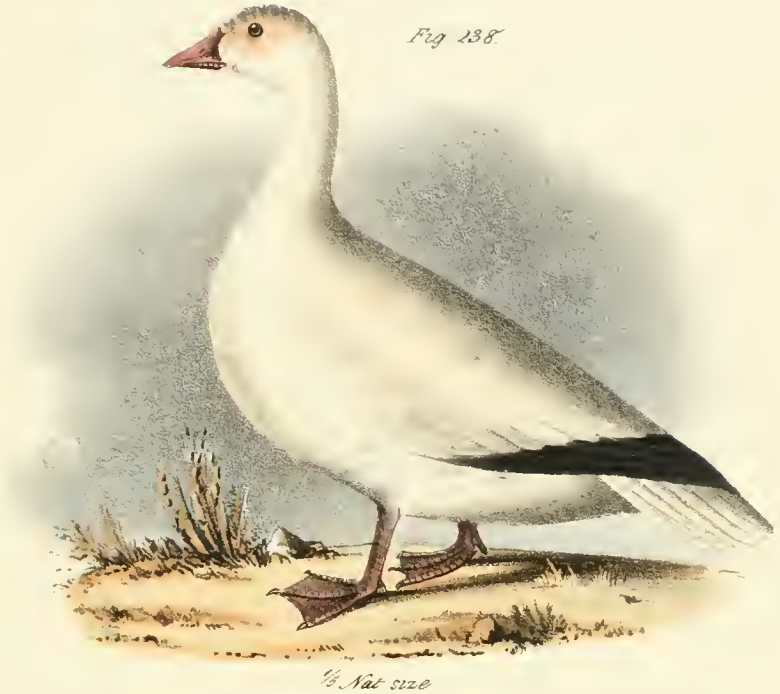
Fig 1 ♂

¼ Nat size

J. H. Hill

Lith. of Fuller & Co. New York

Fig 238.



½ Nat size

Fig 239.

½ Nat size

J.W.Hill

Lith of Endicott, New York

Fig 240

¼ Nat size

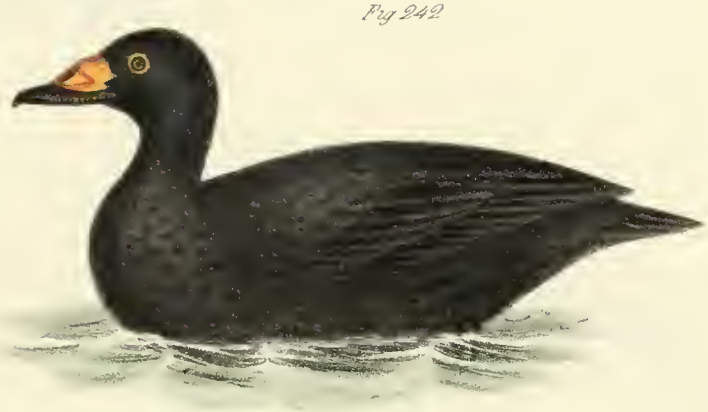
Fig 241.

¼ Nat size

J. W. Hill

Lith of Endicott New York

Fig 242



½ Nat size

Fig 243

½ Nat size.

J.W.Hill

Lith of Endicott New York

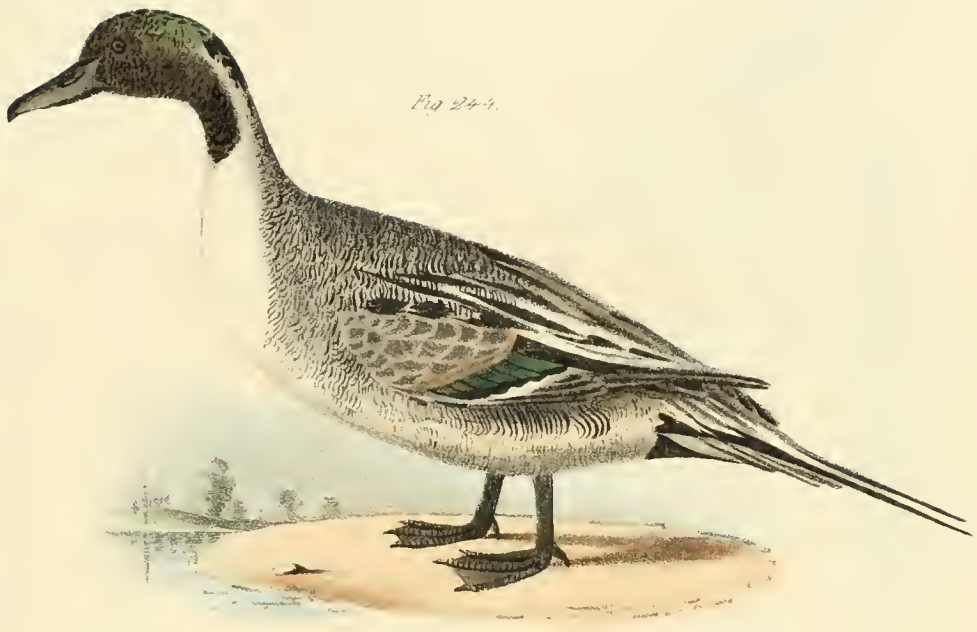


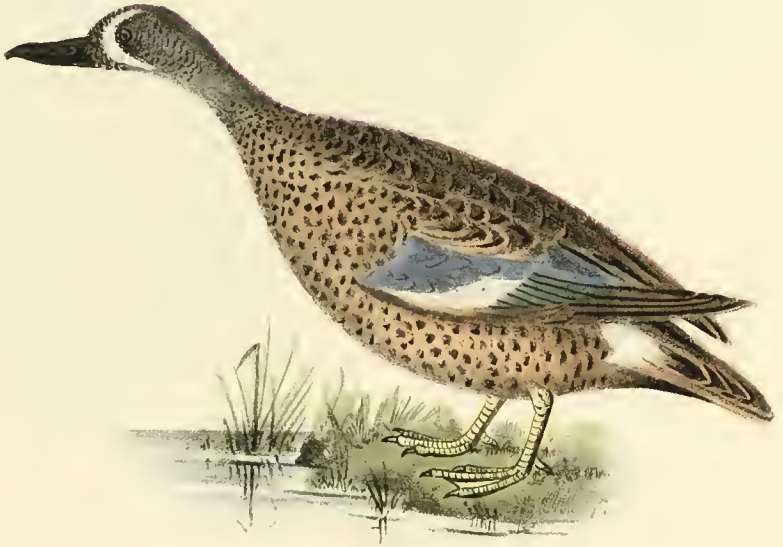
Fig 244.

½ Nat size

Fig 245

½ Nat size

Fig 246



⅓ Nat size

Fig 247

⅓ Nat size

J W Hill

Lith & Engraved Wm [illegible]

Fig 248

Fig 249

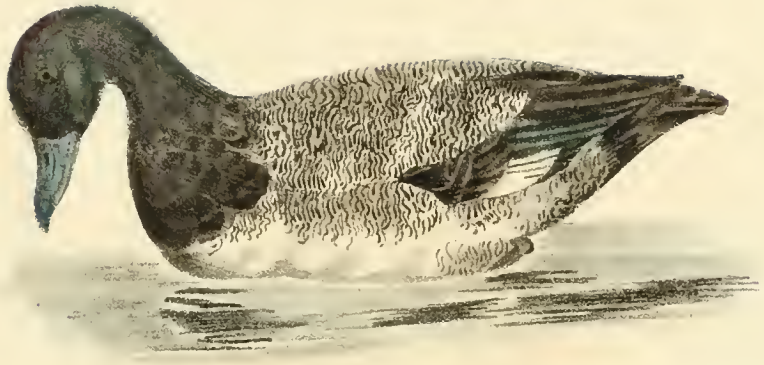
Fig 250

½ Nat size

Fig 251

½ Nat size

Fig 252



⅓ Nat size

Fig 254

Fig 253

¼ Nat size

Fig 259

3 Nat size

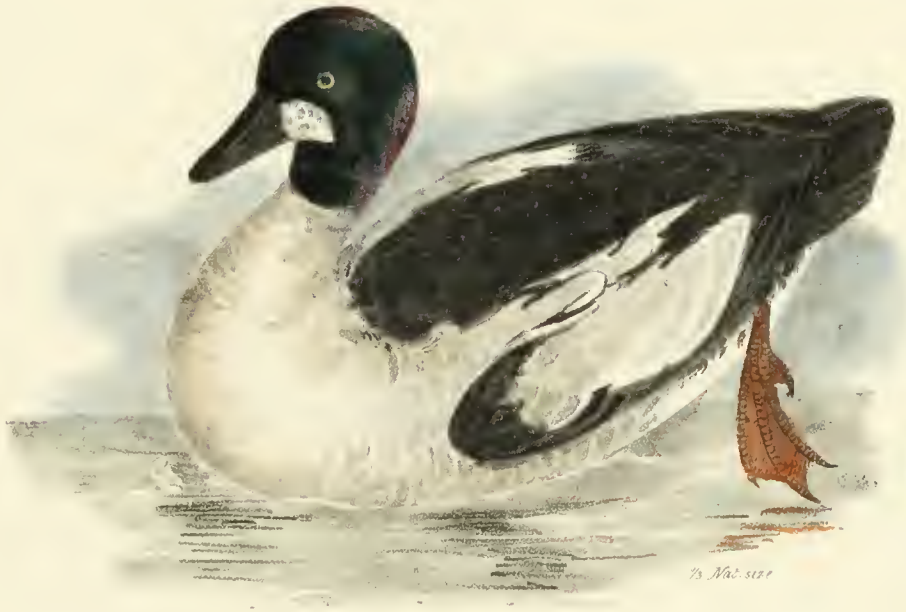
Fig 260

4 Nat size

J W Hill

Lith of Endicott New York

Fig 257



½ Nat. size

Fig 258

½ Nat. size

Fig 959

3/8 Nat size

Fig 960

3/8 Nat size

J W Hill

Lith of Endicott New York

Fig 261

1/3 Nat size

J.W.Hill

Fig 262

1/5 Nat size

Lith of Endicott N.York

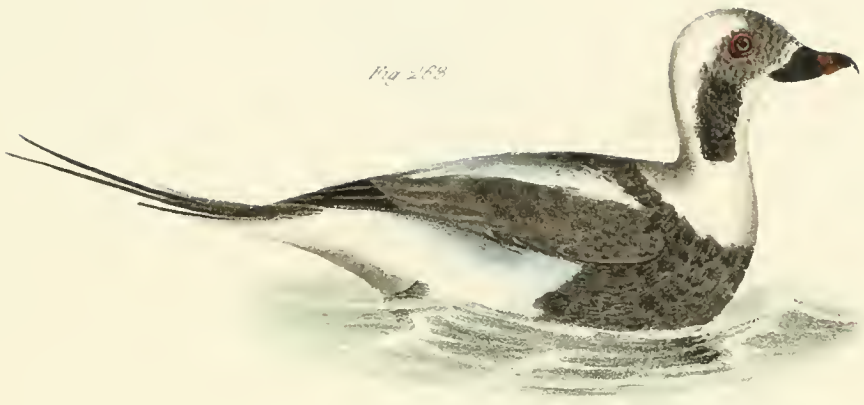


Fig 263

½ Nat size

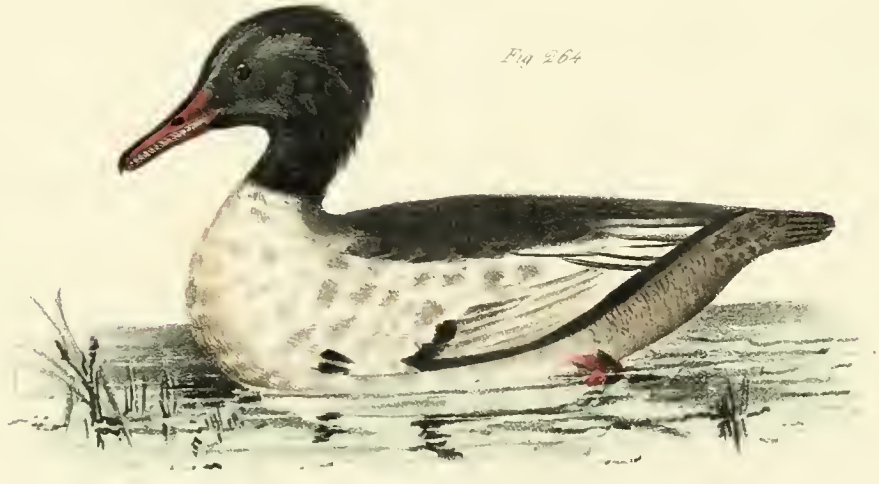


Fig 264

½ Nat size

Lith of Endicott New York

Fig 265

½ Nat size

Fig 266

½ Nat size

TH Hill

Lith of Prattott New York

Fig 267

½ Nat size

Fig 268.

½ Nat size

J W Hill

Lith of Endicott New York

Fig 269

½ Nat size

Fig 270

½ Nat size

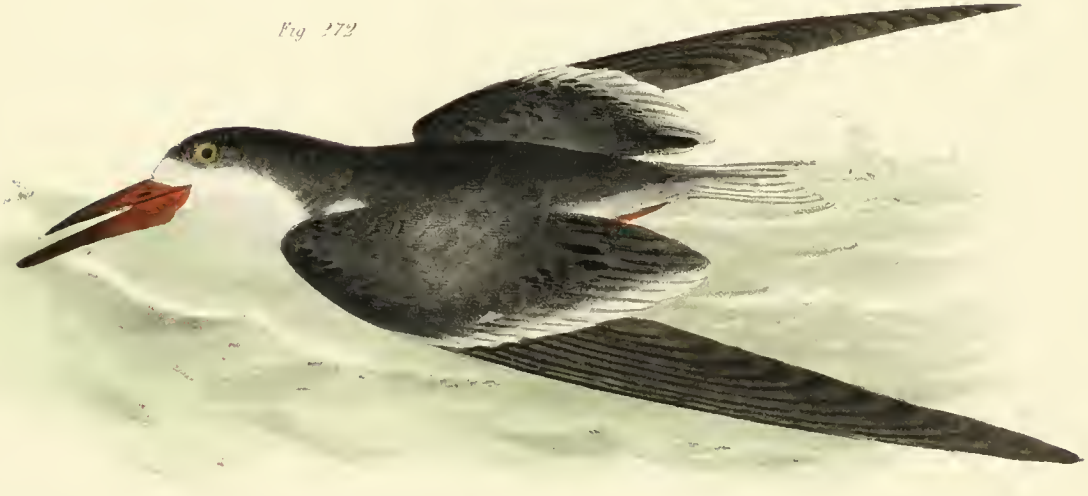
J H Wild

J Ch & F Pritchett Jun

Fig 271

¾ Nat size

Fig 272



½ Nat size

J W Hill

Lith of Endicott, New York

Fig 273.

Nat size.

Fig 274.

Nat size

J. W. Hill

Edth of Endicott New York

Fig 275.

½ Nat size

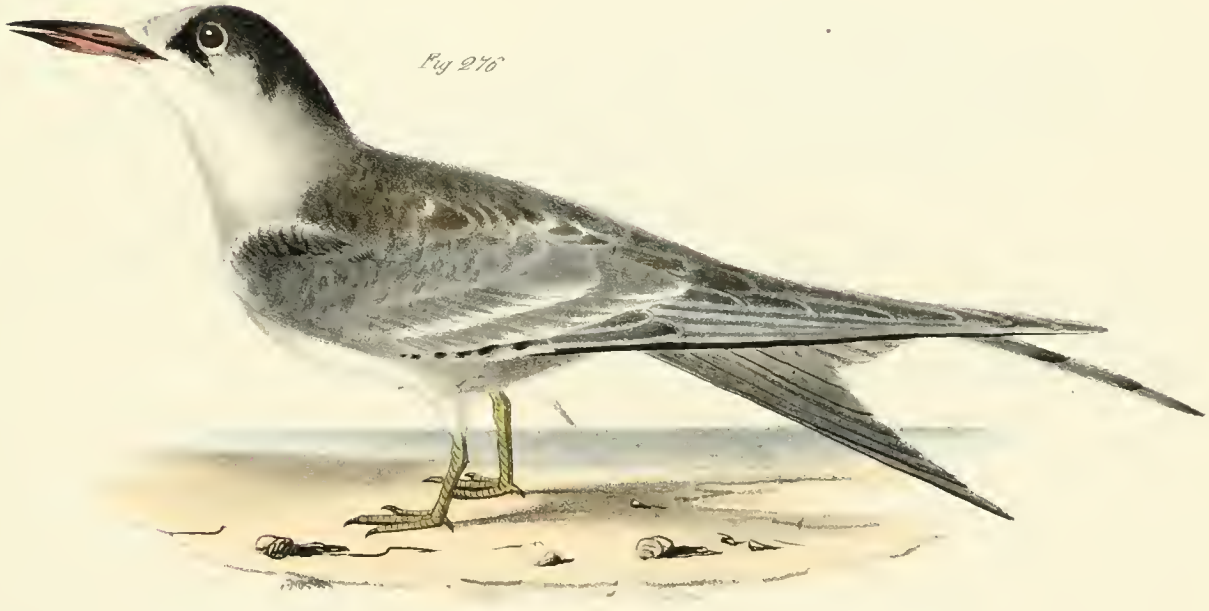


Fig 276

½ Nat size

J. W. Hill

Lith of Endicott New York

Fig 277

½ Nat size

Fig 278. a

Fig 278

¼ Nat size

J W Hill

Lith of Endicott New York

Plate 127.

Fig 279

⅔ Nat size

Fig 280

½ Nat size

J. W. Hill.

Lith of Endicott New York

Fig 281

⅓ Nat size

Fig 282.

⅓ Nat size

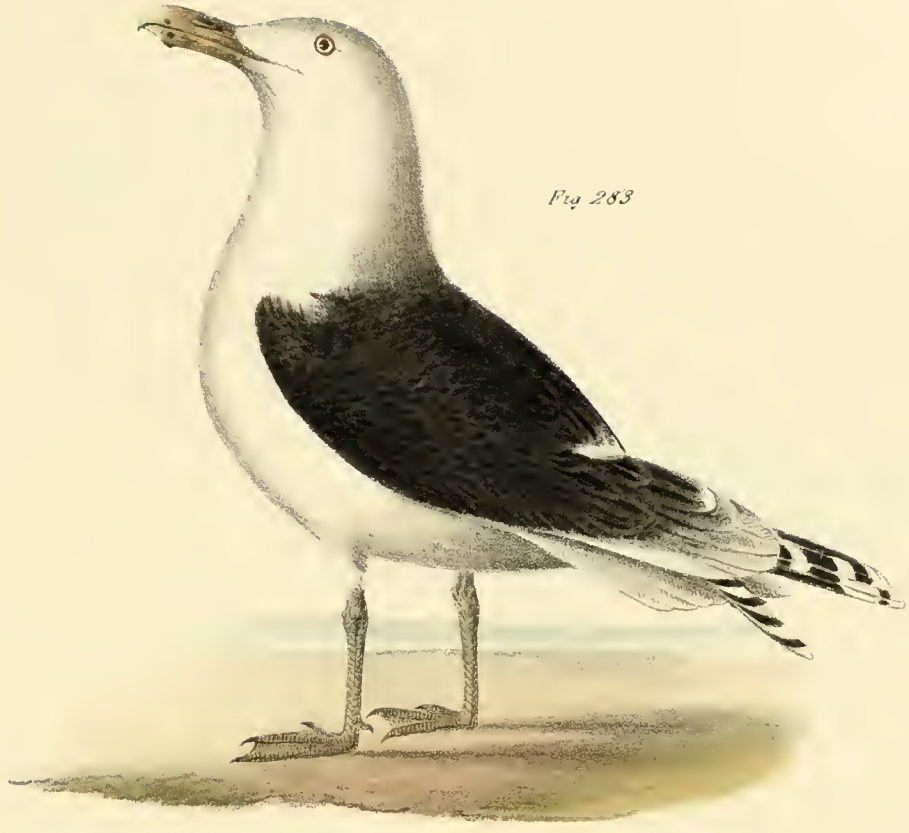
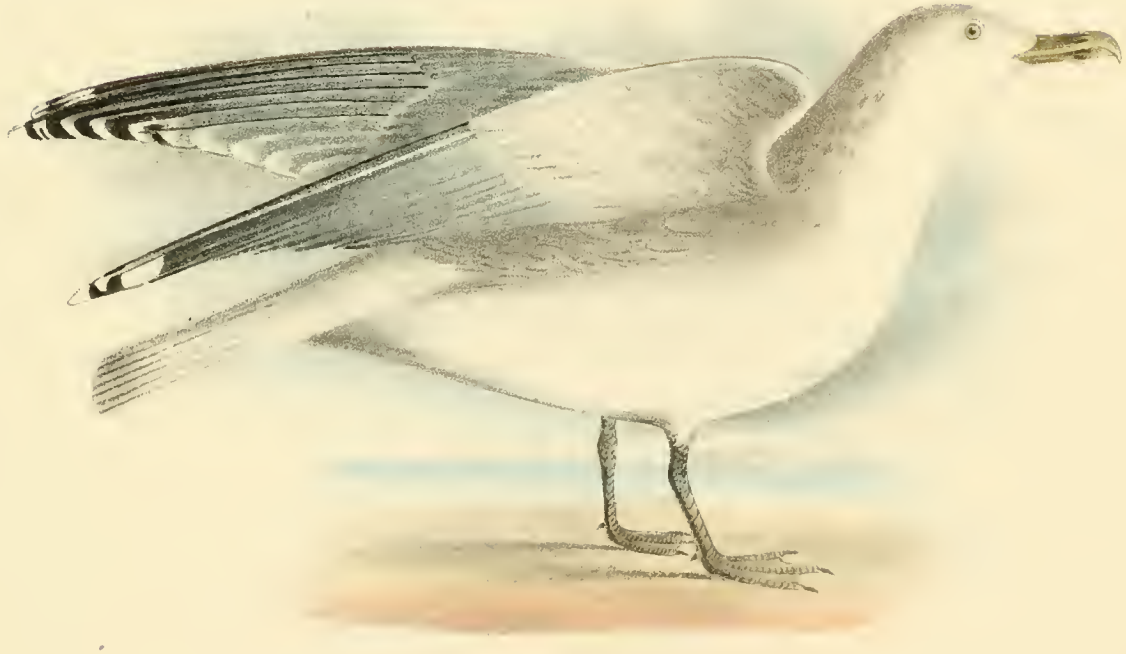


Fig 283

½ Nat size

Fig 284

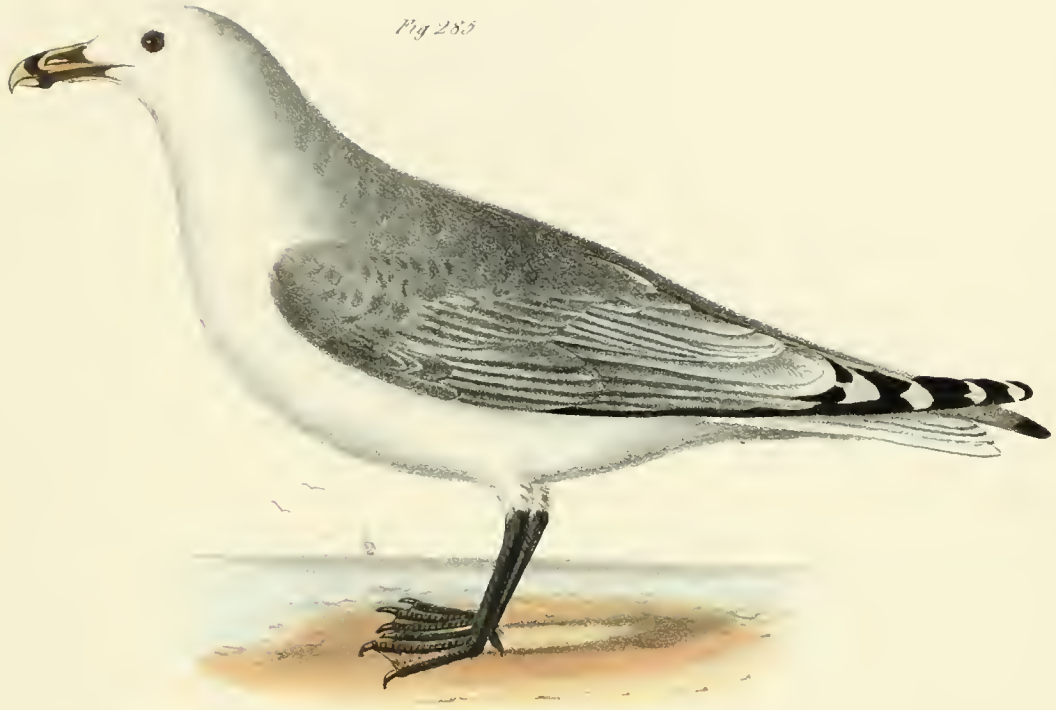


¼ Nat size

J W Hill

Lith of Endicott New York

Fig 285



¾ Nat size

Fig 286

J.W. Hill

Lith. of Pratt, New York

Fig 287

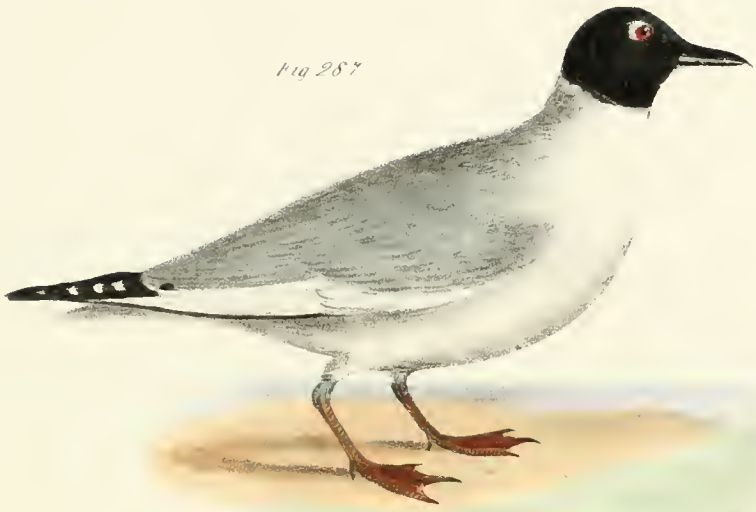


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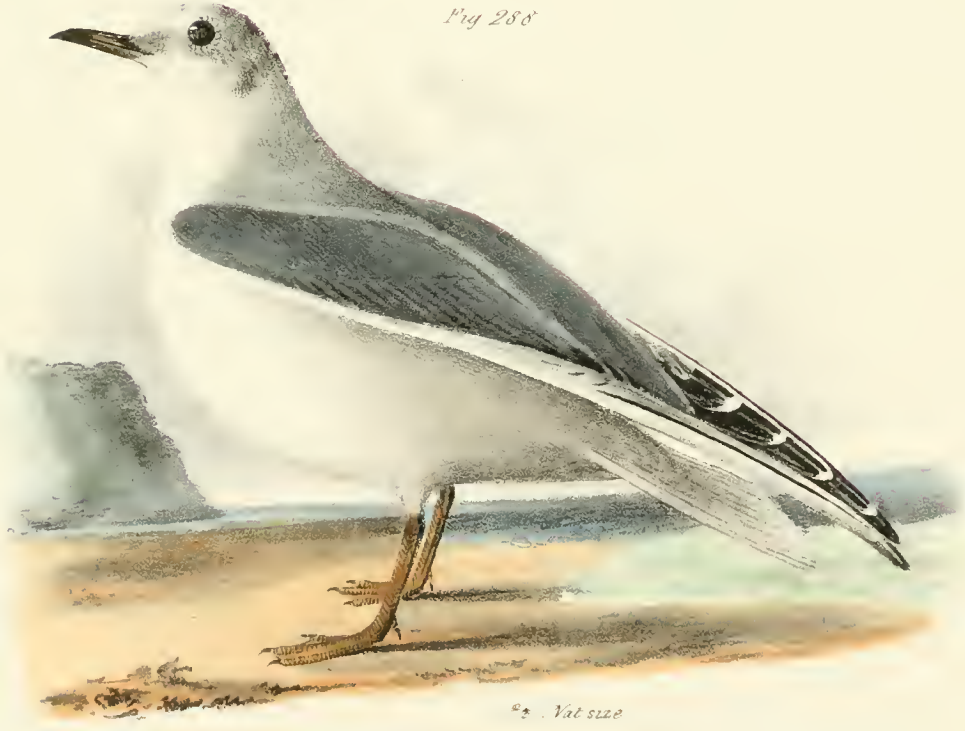
Fig 288



½ Nat size

J. W. Hill

Fig 289

¼ Nat size

Fig 290

⅛ Nat size

J.W. Hill

Lith of Endicott New York

Fig 291.

⅓ Nat size

Fig 292

⅓ Nat size

W Hill

Lith of Endicott New York

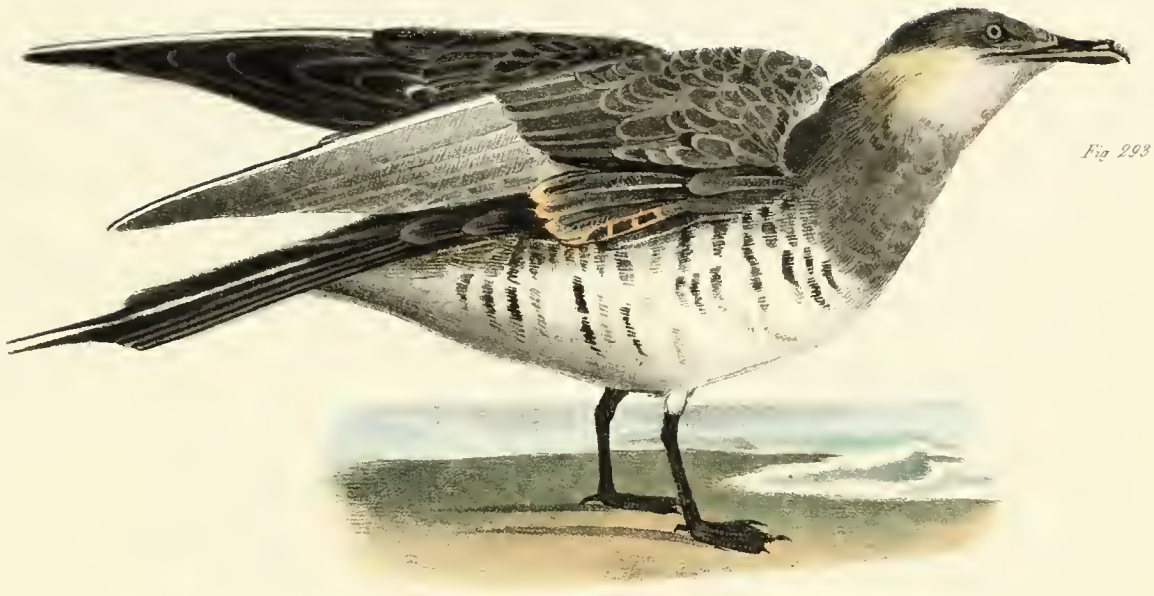


Fig 293

½ Nat size

Fig 294.

½ Nat size

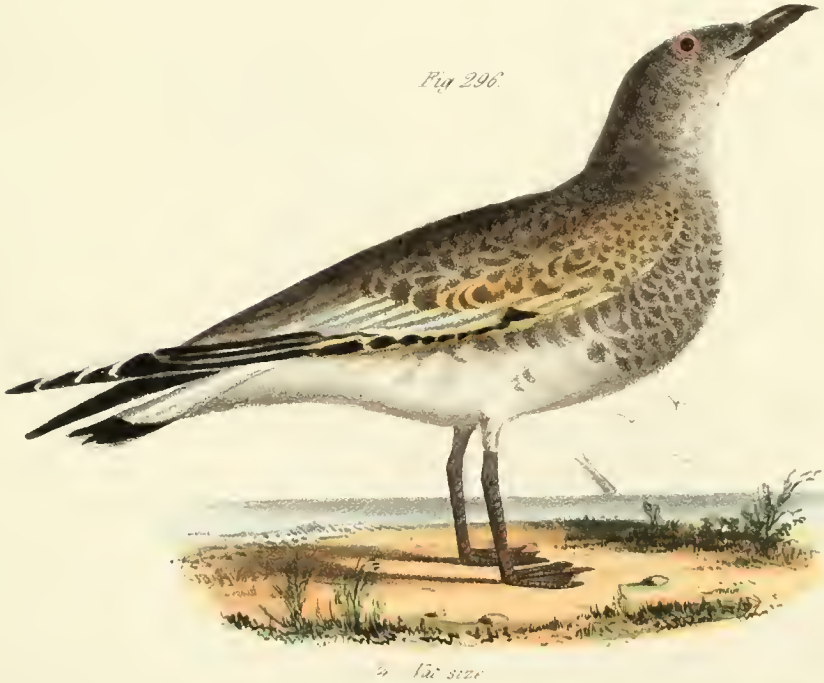
H. Hall

Lith. Imp. Endicott New York

Fig 295.

½ Nat size

Fig 296.



½ Nat size

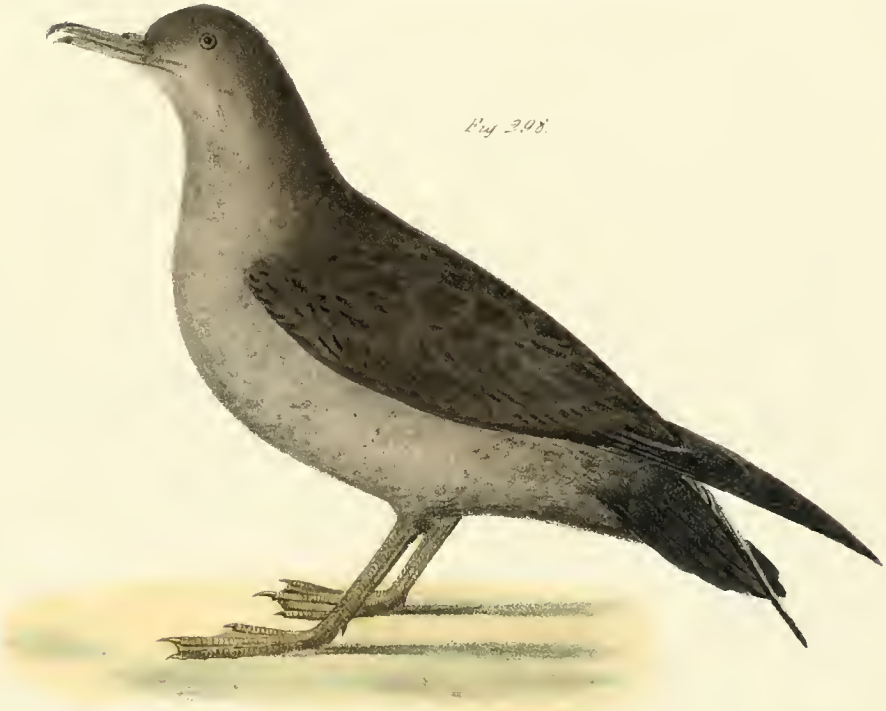
W. Hill

Lith of Endicott New York

Fig 297.

3/4 Nat size

Fig 298.



3/4 Nat size

Lith et Endicott, N York.

Fig 300

5. Nat. size

Fig 299

1/4 Nat. size

J.W.Hill

Lith. of Endicott, New York

Fig 301

J. W. Hill

½ Nat size

Fig 302

½ Nat size

Lith of Endicott New York

Fig. 303

1/6 Nat. size

J. W. Hill

Fig 304

1/5 Nat. size

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Fig 305.

3 Nat size

Fig 306.

¼ Nat size

J W Hill

Lith of Endicott. New York

Fig 307

Fig 308

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